ALAMEDA County Transportation Commission

ACCMA ▪ 1333 Broadway, Suite 220 ▪ Oakland, CA 94612 ▪ PH: (510) 836-2560
ACTIA ▪ 1333 Broadway, Suite 300 ▪ Oakland, CA 94612 ▪ PH: (510) 893-3347
www.AlamedaCTC.org

Memorandum

DATE: September 2, 2010

TO: Planning, Policy and Legislation Committee

FROM: Saravana Suthanthira, Senior Transportation Planner

SUBJECT: Approval of the 2010 Level of Service Monitoring Study Draft Report

Recommendation:
It is recommended that the Commission approve the attached draft 2010 Level of Service (LOS) Monitoring Study Report. The results of the 2010 LOS Monitoring Study were presented to ACTAC and the ACCMA Plans and Programs Committee at their July meetings. One comment was received and has been addressed. Based on the select link analysis from the Countywide Travel Demand Model and after applying as noted below all applicable exemptions, no CMP roadway segments were found to be deficient.

Summary:
Data collection was performed for the 2010 LOS Monitoring Study in Spring 2010 on all of the CMP roadway segments for afternoon and morning peak periods. Monitoring in the a.m. peak is for informational purposes only. Preliminary findings from the data collected were presented to ACTAC in May and June respectively, and final results were presented to ACTAC and the ACCMA Plans and Programs Committee in July 2010.

One comment, from the City of Pleasanton, was received regarding the accuracy of data on the I-580/I-680 interchange westbound to southbound for the PM peak period. The data collection consultants verified that the data reflected existing congested conditions for the segment, that the travel time data presented was the actual data collected, and that the data was collected on two days in March, one day in April and three days in May. Therefore, no changes were made.

The report presents the results of the travel time and speed surveys for 2010. The results indicate that generally the speeds on freeways and arterials have improved, likely due to the continued economic downturn. Based on the select link analysis from the Countywide Travel Demand Model and after applying all applicable exemptions, no CMP roadway segments were found to be deficient.

Changes were made to two sections of the 2010 LOS Monitoring Report compared to previous monitoring reports: Travel Time on the Bay Crossings in Alameda County and Bicycle Counts. The 2010 LOS Monitoring Report includes travel time data for the three Bay bridge crossings connecting to Alameda County from San Francisco and San Mateo County. Data was collected using Toll Tag data from 511.org as directed by the CMA Board in 2009 instead of being collected by Caltrans as was done in previous studies.

Bicycle counts were not collected in Spring 2010. Instead, bicycle counts will be coordinated with an annual bicycle count data collection program being undertaken by Alameda CTC/ACTIA in Fall 2010 for approximately 30 locations in the County. The 12 locations previously counted and monitored in the LOS Monitoring Study are anticipated to be included in the new program. All 30 locations will be included in future LOS Monitoring reports.

Background:
The ACCMA is required to monitor roadway p.m. peak period level of service (LOS) on the Alameda County CMP network per the Congestion Management Program statute passed by the California Legislature in 1990. LOS standards are established and monitored biennially in even numbered years. The study of p.m. peak period travel times has been conducted on the CMP network continuously since 1991. In 1994, the study was expanded to include a.m. peak period runs on selected arterials and freeways. Starting in 2006, all of the CMP roadway segments are monitored in both the p.m. and a.m. peak periods. In 1996, comparative travel times between auto and transit, and in one case, bicycle, was included for five selected origin-destination (O-D) pairs that reflect typical work trips in Alameda County. Over the years, additional O-D pairs were added, resulting in 10 home-work pairs being studied since 2006. In 2002, three O-D pairs representing the three Bay Area bridges that connect to Alameda County and bicycle counts were added.

Fiscal Impact:
No fiscal impact.

Attachments:
Attachment A: Draft 2010 LOS Monitoring Study

Draft Report

2010 LEVEL OF SERVICE MONITORING

ON THE CONGESTION MANAGEMENT PROGRAM ROADWAY NETWORK

ALAMEDA COUNTY TRANSPORTATION COMMISSION

September 2010

Table of Contents

TABLES

FIGURES

This page intentionally left blank

SUMMARY

This report presents the results of the travel time and speed surveys for the Alameda County Congestion Management Program (CMP) designated roadway system ("CMP network") for the year 2010. The results indicate that in general speeds on freeways and arterials have improved, likely due to the continued economic downturn. The survey program included the following elements:

- "Floating car" travel time surveys on all Alameda County freeways (151 survey segments) and designated CMP arterial roads (221 survey segments) during the 4:00 to 6:00 P.M. peak period and 7:00 to 9:00 A.M. peak period. Based on the direction of the CMA Board in 2004, all of the segments are being monitored for afternoon and morning peak periods starting 2006. Monitoring in the A.M. peak is for informational purposes only.

- Travel time surveys on selected ramp movements and "special segments" (23 survey segments) during the P.M. and A.M. peak periods.

- Travel time surveys using both auto and transit travel between ten pairs of origins and destinations.

- Bicycle Counts at twelve intersections using count data supplied by the local jurisdictions.

The following table lists the locations of figures in this report, which illustrate the levels of service on each CMP road segment in each area of the county.

Figure	Area	LOS	Time Period	Page
2	Countywide	"F" Only	A.M. and P.M.	
3	Northern	All	P.M. Peak Hour	
4	Upper Central	All	P.M. Peak Hour	
5	Lower Central	All	P.M. Peak Hour	
6	Southeastern	All	P.M. Peak Hour	
7	Northern	All	A.M. Peak Hour	
8	Upper Central	All	A.M. Peak Hour	
9	Lower Central	All	A.M. Peak Hour	
10	Southeastern	All	A.M. Peak Hour	

2010 LOS MONITORING RESULTS - SYSTEM PERFORMANCE

Observations on Corridor Performance

Based on the 2010 monitoring results, speeds on freeways and arterials generally appear to have improved, likely due to continued economic downturn. The following are the highlights of the roadways performance in comparison with the LOS results in 2008:

- While overall average speeds on the system appeared to have improved. Roadway construction and seismic retrofit activities on major roadways and bridges across Alameda County seemed to have created pockets of congestion on Alameda County roadways. Also, reduced gas prices compared to 2008 could have increased the number of people driving who were previously using other modes such as transit or carpooling.

- Notable construction activities on the major roadways that likely created congestion are: Bay Bridge construction, I-880/5th Avenue Retrofit, I-880/High Street Retrofit, I-880/SR 92 Interchange reconstruction, southbound I-680 Express Lane, I-580 eastbound HOV/HOT Lane, I-580 Isabel Interchange improvements and Caldecott Tunnel 4th Bore Project.

- An increased number of improved LOS F segments from the previous monitoring year was observed in 2010. Improvement in speed on I-238 and SR 262 Mission are likely due to completion of I-238 widening and completion of SR 262/ I-880 interchange improvements.

LEVEL OF SERVICE "F" SEGMENTS

The 2010 surveys revealed that thirty six (36) segments are operating at Level of Service "F" during the P.M. peak period. Of these segments, twenty five (25) are on the freeway system, nine (9) are located on arterial routes, and two (2) segments are on freeway-to-freeway ramps. During the A.M. peak period, twenty one (21) segments operated at LOS "F", of which seventeen (17) are freeway segments, three (3) are arterials and one (1) freeway-to-freeway ramp. The number of segments operating at LOS F has increased by one (1) in the P.M. and three (3) in the A.M. peak periods from 2008.

LOS "F" Segments in the P.M. Peak Period (non-grandfathered)

A total of twenty five (25), sixteen (16) freeway segments, seven (7) arterial segments and two (2) freeway-to-freeway connectors operated at LOS "F" during the P.M. peak period in 2010 in this category. Five (5) of these twenty three (23) segments are operating at LOS F for the first time. The details are shown in the following table:

Freeways and Ramps

	CMP Route	Segment Limits	Jurisdiction	Comments
1	I-80 - WB	Jct I-580 to University	Berkeley-Albany	New LOS F
2	I-580 EB	San Ramon/ Foothill to I-680	County - Pleasanton	Construction
3	I-580 EB	I-680 to Hopyard	Pleasanton	Construction
4	I-580 EB	Hopyard	Pleasanton	Construction
5	I-580 EB	Santa Rita to El Charro	County - Pleasanton	Construction
6	I-580 EB	Harrison to Lakeshore	Oakland	
7	I-580 EB	Coolidge to SH 13 Off	Oakland	New LOS F
8	I-680 - NB	Rt 262/ Mission to Durham Rd	Fremont	Construction/ New LOS F
9	I-680 - NB	Durham Rd to Washington Blvd	Fremont	Construction/ New LOS F
10	I-680 - NB	Vargas Rd to Andrade Rd	County	New LOS F
11	I-880 - NB	Decoto to Alvarado Blvd	Fremont -Union City	
12	I-880 - NB	Alvarado Blvd to Alvarado-Niles Blvd	Fremont -Union City	
13	I-880 - NB	Alv-Niles to Tennyson	Union City - Hayward	Construction
14	SR 13 - SB	Moraga Ave to Hiller (Sig)	Oakland	
15	SR 13 - SB	Redwood to Jct I-580 (EB Merge)	Oakland	
16	SR 84 - EB	Newark Blvd/Arder to I-880 NB (off)	Newark	
17	I-880/SR 260 Connection	SR-260 EB to I-880 NB	Oakland	Construction
18	SR 13/SR 24 Interchange	SR-13 NB to SR 24 EB	Oakland	Construction

Arterial

	CMP Route	Segment Limits	Jurisdiction	Comments
19	Hesperian - NB	Grant to Lewelling	County	Construction
20	Hesperian - SB	Springlake to Lewelling	County	
21	Hesperian - SB	SH 92 - WB to Tennyson	Hayward	Construction
22	SR 84 - EB	Sunol Rd to Plea-Sunol Rd	Fremont	
23	SR 84 - EB	SR 84 (off)/I-680 to Vallecitos Ln	County	Construction
24	SR 123 San Pablo - NB	Allston to University	Berkeley	
25	SR 185 (14th) - NB	46th St. to 42nd	Oakland	Construction

LOS "F" Segments Included in 1991 CMP Baseline ("Grandfathered")

The remaining eleven (11) segments operated at LOS "F" during the 2010 P.M. peak period were also at LOS "F" during the 1991 CMP baseline year (and are therefore grandfathered). The details are below:

	CMP Route	Segment Limits	Jurisdiction
1	I-80 - EB	I-80/I-580 (Merge) to Powell	Emeryville - Berkeley
2	I-80 - EB	Powell to Ashby	Emeryville - Berkeley
3	I-80 - WB	University to Ashby	Emeryville - Berkeley
4	I-80 - WB	Ashby to Powell	Emeryville - Berkeley
5	I-580 EB	I-80 to I-980	Oakland
6	I-980 - EB	I-880 to SR 24 @ 580	Oakland
7	SR 24 - EB	Jct I-580 (on) to Broadway/SR 13	Oakland
8	SR 24 - EB	Broadway/ SR 13 to Caldecott (enter)	Oakland
9	SR 92 - EB	Clawiter to I-880	Hayward
10	Hesperian - NB	La Playa to W. Winton Ave	Hayward
11	SR 13 Ashby - EB	College to Domingo	Berkeley

LOS "F" Segments in A.M. Peak Period

There are total 21 segments, 17 freeway segments, 3 arterial segments and one freeway to freeway connector, which are operating at LOS F. Of these 21 segments, 12 segments performed at LOS F previously. Of the remaining 9 segments that are operating at LOS F for the first time, 4 of them appeared to have been impacted by construction activities.

Freeways and Ramps

	CMP Route	Segment Limits From	To	Jurisdiction	Comments
1	I-80 - WB	I-580 Split to	Toll Plaza	Oakland	Construction
2	I-80 - WB	Toll Plaza	SF County	Oakland	Construction
3	I-580 - WB	SH 13 Off	Fruitvale	Oakland	
4	I-580 - WB	SH-24 On-ramp	I-80/580 Split	Oakland	
5	I-580 - WB	Greenville Rd	1st St	Livermore-County	Construction
6	I-580 - WB	1st St	Portola Ave.	Livermore	Construction
7	I-880 - NB	Alv-Niles	Tennyson	Union City-Hayward	Construction
8	I-880 - NB	Marina Blvd	SR 112/Davis	Oakland	New LOS F
9	I-880 - NB	Hegenberger	High/42	Oakland	New LOS F /Construction
10	I-880 - NB	High/42	23rd (1st on)	Oakland	New LOS F /Construction
11	I-880 - SB	I-238 (Marina before 06)	A St	San Leandro-County	Construction
12	I-880 - SB	A St	Rt 92	Hayward	Construction
13	I-880 - SB	Alvarado-Niles	Alvarado	Union City -Fremont	New LOS F
14	I-880 - SB	Decoto	Stevenson	Union City -Fremont	New LOS F
15	SR 13 - NB	Morage Ave	Hiller (sig)	Oakland	New LOS F
16	SR 24 - EB	Broadway/SR 13	Caldecott (enter)	Oakland	Construction
17	SR-13/SR-24	SR-13 NB	SR-24 EB	Oakland	Construction
18	SR 84 - WB	Paseo Padre Pkwy	Toll Gate	Newark	

Arterials

	CMP Route	Segment Limits From	To	Jurisdiction	Comments
19	Hesperian - NB	Grant	Lewelling	County	New LOS F /Construction
20	SR 84/Fremont (Fre) - WB	Peralta	Thorton	Fremont	New LOS F
21	SR 185 (14th) - NB	46th St	42nd	Oakland	New LOS F /Construction

IMPROVED SEGMENTS

Table 1 lists nineteen segments that operated at LOS "F" during the 2008 surveys but operated at an improved Level of Service in the 2010 surveys. Improvements on I-238 and SR 262 Mission are likely due to completion of I-238 widening and completion of SR 262/ I-880 interchange improvements. The number of improved LOS F segments from the previous monitoring year increased from 15 in 2008 to 19 in 2010.

Table 1: Segments at LOS "F" in 2008 and not in 2010

	CMP Route	Direction	Segment Limits From	To	2008 LOS (Speed)	2010 LOS (Speed)	Prior LOS F
			P.M. PEAK PERIOD				
1	I-80	EB	Toll Plaza	I-580 SB Merge	F (28.6)	C (54.2)	93-'02, 06-08
2	I-80	EB	Ashby	University	F(20)	E(31.7)	91-95,97-08
3	I-80	EB	Jct I-580 (off)	Central (on)	F(26.7)	E(39.1)	91-92,96-97,02,06-08
4	I-238	WB	I-580	I-880	F(24.8)	A(61.8)	97-08
5	I-880	SB	Hegenberger	SR 112/Davis	F (24.5)	E(37.6)	91-92,08
6	SR 84	EB	Thornton	Newark Blvd/ Ardenwood Blvd	F(25.5)	A(65.8)	08
7	I-580/I-680	Connector	I-580 WB	I-680 NB	F(19.2)	B(31.3)	08
8	Hesperian	NB	Tennyson	SH 92-WB	F(8.6)	E(15.0)	06-08
9	Hesperian	SB	14th	Fairmont	F(8.6)	E(12.4)	91,95,97,08
10	SR 123 San Pablo	NB	Marin	Washington	F(6.2)	B(24.1)	08
			A.M. PEAK PERIOD				
11	I-80	WB	Central	Jct -I580	F(24.6)	E(37.0)	97,00-02,06-08
12	I-80	WB	Jct I-580	University	F(25.6)	E(33.3)	97,00-02,06-08
13	I-238	WB	I-580	I-880	F(15.9)	E(32.1)	97-08
14	I-580	WB	Portola	SR 84/Airway Blvd.	F(29.4)	D(42.4)	04,08
15	I-880	SB	Automall Pkwy	Rte 262/Mission	F(22.0)	C(54.3)	04-08
16	SR 260/I-880	Connector	SR 260 EB	I-880 NB	F(12.6)	E(18.8)	
17	Hesperian	NB	14th	Fairmont	F(9.7)	E(12.9)	
18	SR 84	EB	Sunol Rd	Plea-Sunol Rd	F(5.5)	D(19.2)	
19	SR 262 Mission	WB	I-680 NB	I-880 SB	F(11.0)	D(21.3)	

Overall Average Speed

The overall average speeds have been improving since 2006 both on freeways and arterials. The travel time surveys showed an increase of 0.8 miles per hour on the freeway system and 3.0 miles per hour on the arterials during the p.m. peak period between 2008 and 2010.

ORIGIN-DESTINATION SURVEYS

The Origin and Destination (O-D) pair data was collected for 10 pairs for auto and 9 for transit. Transit travel times have improved on 6 pairs and worsened on 2 (one transit travel has unqualified data and is not being reported for this cycle). The largest transit travel time improvement was between Oakland and Pleasanton where the travel time dropped by 31% (107 minutes to 74 minutes). This could be due to a direct Wheels bus connection available at the BART station this year as opposed to having to transfer twice to get to the destination in previous cycles. In early Spring 2010, AC Transit had implemented system wide changes to their bus schedules. The effect, if any, of these changes on travel times is not yet known.

Auto travel time either increased or remained the same, with the exception of travel between Hayward and Livermore where the travel time decreased by 6%. The largest increase was between Fremont and Pleasanton where the auto travel time increased by 42 percent or 11 minutes.

For the 10 pairs measured, travel times by both auto and transit increased on two pairs: Fremont-Pleasanton and Alameda-Oakland. As before, the worst transit commute was between Fremont and Pleasanton (154 minutes). For the O-D pairs studied, transit travel times range between 2-4 times longer than auto travel, slightly improved over 2008 results where transit travel times ranged between 2-5 times longer than travel by auto.

BICYCLE COUNTS

Beginning with the 2010 LOS Monitoring cycle, the collection of bicycle counts is being coordinated with Alameda CTC/ACTIA, who is pursuing an annual bicycle count data collection program starting in Fall 2010 for approximately 30 locations across the County. The 12 locations where the Alameda CTC/CMA had been reporting bicycle counts are anticipated to be included in the program's count locations. In order to monitor trends in bicycling, future LOS Monitoring reports will include bike counts beginning in the Fall instead of in the Spring for all the 30 locations including the 12 locations monitored in previous LOS Monitoring Reports.

1. INTRODUCTION

The Congestion Management Program statute, passed by the California State Legislature in 1990, requires that all elements of the Program be monitored at least biennially by the designated Congestion Management Agency (CMA)[1]. The Alameda County Congestion Management Agency, as the designated CMA for Alameda County, has established the Alameda County Congestion Management Program (CMP) which requires that Level of Service (LOS) standards be established and monitored biennially in even numbered years on the Alameda County CMP designated roadway system ("network"). The CMP system includes all of the major freeways and arterial roadways in Alameda County and is shown in Figure 1.

The objectives of this monitoring effort are:

- to determine the average travel speeds and existing LOS throughout Alameda County;
- to identify those roadway segments in the County that are operating at LOS "F"; and
- to identify long-term trends in traffic congestion on the CMP network.

The CMP designated roadway system consists of approximately 232 miles. Of this total, 134 miles are freeways, 71 miles are conventional state highways, and 27 miles are City/County arterials. The full list of routes, summarized by jurisdiction, is shown in Table 2. Of the fifteen jurisdictions, Piedmont is the only city in Alameda County that does not have any roadways that are part of the CMP network.

The study of P.M. peak period travel times has been conducted on the CMP network continuously since 1991. In 1994, the study was expanded to include A.M. peak period runs on selected arterials and freeways. Starting in 2006, all of the CMP roadway segments are monitored in both PM and AM peak periods. In 1996, the comparative travel times between auto and transit, and in one case bicycle, was also included for five selected origin-destination (O-D) pairs that reflect typical work trips in Alameda County. Over the years, additional O-D pairs were added, resulting in 10 home-work pairs being studied since 2006. In 2002, three pairs were added representing the three Bay bridges that connect to Alameda County. Bicycle counts at selected twelve (12) intersections across the County were also added in 2002.

[1] The most recent Alameda County Congestion Management Program (CMP) was adopted by the Alameda County Congestion Management Agency on December 3, 2009. The original CMP was adopted on October 24, 1991.

This page intentionally left blank

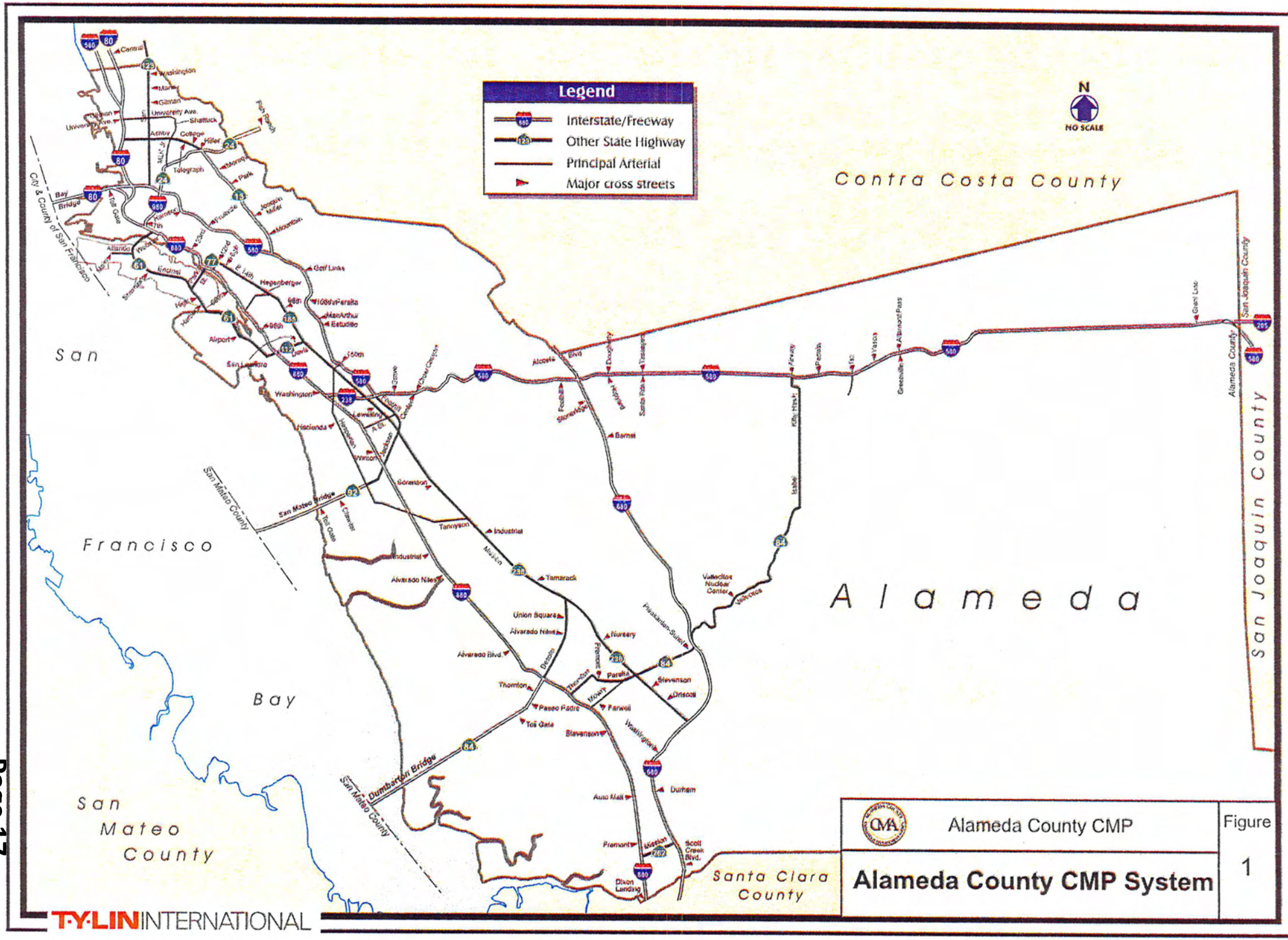

Legend
Interstate/Freeway
Other State Highway
Principal Arterial
Major cross streets
N
NO SCALE
Contra Costa County
San Joaquin County
Alameda
San Francisco Bay
San Mateo County
Santa Clara County
Alameda County CMP
Alameda County CMP System
Figure 1
TY·LIN INTERNATIONAL

Table 2: Alameda County CMP Designated Roadway System[2] Routes and Estimated Mileage by Jurisdiction

Jurisdiction	Freeway	Miles	Other State Highways	Miles	Other Arterials	Miles
Albany	I-80 I-580	0.61 0.92	SR 123 (San Pablo Ave.)	1.22	None	--
Berkeley	I-80	3.14	SR 123 (San Pablo Ave.) SR 13 (Ashby/Tunnel Rd.)	2.36 3.87	University Ave. Shattuck Ave. MLk Jr Blvd. Adeline	2.04 1.84
Emeryville	I-80	1.31	SR 123 (San Pablo Ave.)	0.68	None	--
Oakland	I-80 I-880 I-980 I-580 SR 24 SR 13	4.09 7.66 2.30 11.28 4.50 5.43	SR 123 (San Pablo Ave.) SR 13 (Tunnel Rd.) SR 61/260 (Tubes) SR 61 (Doolittle Dr.) SR 77 (42nd Ave.) SR 185 (E 14th St.)	1.19 0.10 0.66 2.39 0.31 3.98	MLK Jr. Blvd. Hegenberger Rd. 29th Ave./23rd Ave. -(See Park St-Alameda)	0.89 2.52 0.85
Piedmont	None	--	None	--	None	--
Alameda	None	--	SR 61 (Doolittle Dr., Otis, Webster St) SR 61/260 (Tubes)	4.47 0.65	Atlantic Ave. Park St.	0.80 0.55
San Leandro	I-880 I-580	3.78 2.95	SR 61 (Doolittle Dr.) SR 61/112 (Davis St.) SR 185 (E 14th St.)	0.70 1.78 3.16	150th Ave. Hesperian Blvd.	0.49 0.97
Hayward	I-880 SR 92	4.23 6.36	SR 185 (Mission Blvd.) SR 238 (Mission Blvd.) SR 238 (Foothill Blvd.) SR 92 (Jackson St.)	0.85 3.29 1.50 1.58	A St. Hesperian Blvd. Tennyson Rd.	1.61 2.60 2.32
Union City	I-880	1.70	SR 238 (Mission Blvd.)	2.57	Decoto Rd.	1.76
Fremont	I-680 I-880 SR 84	6.20 11.96 3.17	SR 238 (Mission Blvd.) SR 262 (Mission Blvd.) SR 84 (Thornton, Fremont, Mowry Ave.)	5.03 1.22 10.99	Decoto Rd. Mowry Ave.	1.15 2.96
Newark	SR 84	1.99	None	--	None	--
Pleasanton	I-580 I-680	4.65 5.26	None	--	None	--
Livermore	I-580	4.61	SR 84	5.29	1st Street	1.66
Dublin	I-680	1.84	None	--	None	--
Unincorporated Areas	I-680 I-580 I-238 I-880	7.91 22.50 1.99 1.93	SR 84 (Vallecitos Rd.) SR 185 (Mission Blvd & E 14th) SR 238 (Foothill Blvd.)	7.97 2.47 0.79	Hesperian Blvd.	1.99
Totals		**134 mi**		**71 mi**		**27 mi**

[2] As adopted by the Alameda County Congestion Management Agency, October 24, 1991 except for the re-aligned State Rte 84, and 1st Street in Livermore that has been changed in the 2004 and 2006 Studies respectively.

LEVEL OF SERVICE

Roads and intersections are evaluated in terms of "Level of Service" (LOS) which is a measure of driving conditions and vehicle delay. Levels of Service range from "A" (the best) to LOS "F" (the poorest).

- Levels of Service A, B, and C indicate conditions where traffic can move relatively freely.
- Level of Service D describes conditions where delay is more noticeable.
- Level of Service E describes conditions where traffic volumes are at or close to capacity, resulting in significant delays.
- Level of Service F characterizes conditions where traffic demand exceeds the available capacity, with very slow speeds (stop-and-go), long delays (over one minute at intersections), and average speeds of less than half of the uncongested or free-flow speed.

CMP LEVEL OF SERVICE STANDARDS

The CMP statute requires that a level of service standard be established for the CMP designated roadway system. Each year, member agencies must demonstrate that all CMP roadway system within their jurisdictions are operating at or above the CMP traffic LOS standard. A member agency's gas tax subventions may be withheld if the member agency does not maintain the traffic LOS standard or have an approved deficiency plan for roadways that fall below the LOS standard.

The basic level of service standard for CMP monitoring purposes is LOS "E". An exception is made for roadways that operated at LOS "F" in the 1991 "baseline" conditions. These roadways were "grandfathered" at LOS "F".

2. STUDY METHODOLOGY

The Alameda County CMP established that measurement of LOS be based on average travel speed, consistent with the method described in the "Manual of Traffic Engineering Studies[3]". The study methodology involves establishing roadway segment boundaries, collecting travel time data, computing travel speeds, and comparing the average speeds with the LOS speed ranges as specified in the 1985 Highway Capacity Manual[4]. For this study, the "floating car" method was used to record travel times between roadway segments.

DEFINITION OF ROADWAY SEGMENTS

The 232-mile Alameda County CMP designated roadways system was divided into approximately 372 segments for this study, using the methodology described below for the different roadway classifications. The number of segments increased from 296 in 2006 to 372 in 2008 due to the segmentation of longer CMP network segments into shorter segments.

Freeways

When the CMP roadway segments were developed in 1991, major interchanges were used as the segment boundaries for freeways. Along more heavily traveled sections, the segments generally span from one to three interchanges. Where traffic volumes entering and exiting the freeway were minor, three or more sections were combined into longer segments. This was the case, for instance, in the eastern section of the I-580 corridor. However, over the last two decades the land use and traffic patterns have changed in places such as East County as a result of housing and job growth, creating the need to split longer CMP segments into shorter segments. This exercise was carried out as a trial in the 2006 LOS Monitoring Study. It was subsequently refined and adopted in the 2007 CMP. As of the 2008 monitoring cycle, the LOS Monitoring Study uses the shorter segments.

Arterials

For arterials, each section between two adjacent signals was first reviewed to determine its arterial class as Class I, II, or III. Arterial class is based on access control, land use intensity, free-flow speed, and other factors as defined in the 1985 Highway Capacity Manual (Chapter 11, pp. 11-1 to 11-4)[5]. Break points between segments generally occur at jurisdiction boundaries, at points where the number of travel lanes change, at major arterial street crossings, and at points where land use,

[3] Paul C. Box and Joseph C. Oppenlander, *Manual of Traffic Engineering Studies,* 4th ed. (Arlington VA.: Institute of Transportation Engineers, 1976).

[4] Transportation Research Board Special Report 209, *Highway Capacity Manual*, (Washington, D. C.: Transportation Research Board, 1985).

[5] Highway Capacity Manual, Special Report 209, a publication of the Transportation Research Board, Washington D.C., 1985

speed limit, or channelization schemes change significantly. The segment boundaries for the arterial roadways are identical for both directions and the distances are generally the same or sufficiently close so as to be considered equal. Nevertheless, the distances for each direction of the same segment may differ somewhat in cases of very wide intersections.

In 2006, similar to the freeway CMP network segments that were split into shorter segments, a few of the arterial roadway segments were also split into shorter segments and the shorter segments were used starting with the 2008 LOS Monitoring Study.

LEVEL OF SERVICE SPEED STANDARDS

This study uses the LOS speed standards approved by the Alameda County CMA shown in Table 3 for arterials and freeways. The standards for other more unique types of roadway segments are described below.

Rural Roadways

One of the CMP routes, State Route 84 from the southern city limit of Livermore to Mission Boulevard in Fremont, is a two-lane rural roadway, which requires a special analysis procedure. On this roadway, traffic and speed characteristics are fairly uniform. Variations in speed are a function of roadway curvature and the presence of slow trucks in the traffic stream. Based on suggested guidelines from the Highway Capacity Manual,[6] LOS "A" is deemed to occur when vehicles are traveling at a free flow speed for the given roadway conditions. LOS "F" is estimated to occur when speeds have dropped below 50 percent of the free flow speeds. Levels of Service "B" to "E" are calculated at even intervals between free flow speeds and LOS "F" speeds. Initial free flow speeds were determined based on special studies conducted in 1992 surveys during off-peak, low-volume conditions to document the free flow speed. Considering the change in land use pattern combined with the roadway improvements made since 1992, it was determined that new free flow surveys should be conducted to document the free flow surveys for these routes that reflect the current conditions. Therefore, as part of the 2010 LOS Monitoring Study and consistent with the previous 1992 runs to document the free flow speeds, special runs were made during off peak, low volume conditions and new free flow speeds were determined. These free flow speeds are used in the 2010 LOS Monitoring Study to determine the levels of service of the rural roadway segments.

Freeway-to-Freeway and State Route-to-Freeway Ramps

Separate travel time/speed runs were conducted for the ramps at freeway-to-freeway interchanges, since these connections can frequently have very different characteristics than the freeways themselves. The guidelines for establishing LOS were similar to those used for rural highways. LOS "A" is deemed to occur when vehicles are traveling at the free flow speeds for the given roadway conditions. Special studies were previously conducted as a part of the 1992 studies, during off-peak low-volume conditions, to document free flow speeds. Per the suggested guidelines of the Highway Capacity Manual, LOS "F" occurs when speeds drop below 50 percent of the free flow speeds. Levels of Service "B" to "E" are calculated at even intervals between free

[6] Highway Capacity Manual, Special Report 209, a publication of the Transportation Research Board, Washington D. C., 1985.

flow speeds and LOS "F" speeds. The ramp locations studied for the 2010 LOS Monitoring Study are:

1. I-80 to I-580 connections (Oakland-Emeryville area)
2. I-580 to SH 24 connections (Oakland)
3. SH 13 to SH 24 connections (in the vicinity of the Caldecott Tunnel, Oakland)
4. I-880 to I-238 connections (San Leandro)
5. I-238 to I-580 connections (Hayward)
6. I-580 to I-680 connections (Pleasanton)
7. I-880 to SH 260 connections (at the Alameda tubes, Oakland)

Table 3: Relationship between Average Travel Speed and Level of Service
Alameda County Congestion Management Agency

Levels of Service for Freeway Sections[7]

LOS	Density (pc/mi/ln)[8]	Speed (mph)	Volume/Capacity Ratio	Maximum Service Flow (pcphpl)[9]
A	≤ 12	≥ 60	0.35	700
B	≤ 20	≥ 55	0.58	1,000
C	≤ 30	≥ 49	0.75	1,500
D	≤ 42	≥ 41	0.90	1,800
E	≤ 67	≥ 30	1.00	2,000
F	>67	<30	---[10]	---

Range for Level of Service F for Freeway Sections[11]

F30 – Average Travel Speed <30
F20 – Average Travel Speed <20
F10 – Average Travel Speed <10

Arterial Levels of Service[12]

Arterial Class	I	II	III
Range of Free Flow Speeds (mph)	45 to 35	35 to 30	35 to 25
Typical Free Flow Speed (mph)	40 mph	33 mph	27 mph
Level of Service	**Average Travel Speed (mph)**		
A	≥ 35	≥ 30	≥ 25
B	≥ 28	≥ 24	≥ 19
C	≥ 22	≥ 18	≥ 13
D	≥ 17	≥ 14	≥ 9
E	≥ 13	≥ 10	≥ 7
F	< 13	<10	<7

[7] Adapted from Table 4-1, Special Report 209, Highway Capacity Manual; 1985.
[8] Passenger cars per mile per lane.
[9] Maximum service flow under ideal conditions, expressed as passenger cars per hour per lane.
[10] Highly variable, unstable flow; V/C Ratio is not applicable.
[11] Approved by Plans and Programs Committee of the ACCMA on June 14, 2004 to show degrees of LOS F on congested roadways
[12] Table 12-1, Special Report 209, Highway Capacity Manual, 1985. For Rural Roadways, refer to Table 8-1 in the Highway Capacity Manual.

DATA COLLECTION

Travel time data was collected for all segments on the CMP network from the second week of March 2010 through June 10, 2010. Travel time runs were made during the afternoon peak hours of 4:00 to 6:00 P.M and morning peak hours of 7:00 to 9:00 A.M. Consistent with the CMP guidelines, all runs were made on a Tuesday, Wednesday, or Thursday of five-day work week.

The travel time runs were spread evenly throughout the two-hour period. For each travel time run, the actual clock time was recorded as the test car passed the checkpoint. The travel times between checkpoints were then computed as the difference between the two corresponding clock times.

For the majority of the CMP system, at least six runs were made on each roadway segment. More than six runs were made on some LOS "E" and "F" segments where heavy congestion has been previously reported where a greater range of fluctuation in travel speed was found, or where questionable data was reported, On certain routes where free flow conditions of LOS "C" or better were experienced in 2010 and where this data was consistent with previous reports, the studies were sometimes concluded after four runs were completed. The number of runs that were conducted on each route and the times and dates of the runs are included in the *Technical Compendium*, which is available for review at the ACCMA.

Construction Activities and Improvements

Some CMP roadway segments were under construction during the 2010 study period, and the travel time/speed data on these routes could be considerably different than normal average traffic conditions. When the travel time runs were conducted (March-June, 2010), the projects were under construction: the Bay Bridge; I-880/5th Avenue Retrofit; I-880/High Street Retrofit; I-880/SR 92 Interchange reconstruction; southbound I-680 Express Lane; I-580 eastbound HOV/HOT Lane; I-580/Isabel Interchange improvements and Caldecott Tunnel 4th Bore Project. At several locations, there may have been construction occurring along the edge of the roadway, but it was judged that the construction did not have a significant impact on the travel time results.

DATA ANALYSIS PROCEDURES

The travel speeds have been determined using the measured times and the distances between the checkpoints. The section-by-section and run-by-run travel time and speed data were checked for errors and abnormal results. Mathematically, the average travel time for a segment was computed as the sum of the average travel times of the individual sections comprising the segment. The average travel speed has been determined by dividing the average travel time for the segment into the segment length. For a more complete discussion of study methodology, see the description that was included in the initial study for establishing the existing Level of Service[13].

The LOS results represent the average travel time during the two-hour peak periods on an average weekday. For many roadway segments, the range of measured speeds is very constant throughout

[13] Abrams Associates, "Establishing the Existing Level of Service for the Alameda County CMP Designated Roadway System," November 26, 1991.

the two-hour period. For others, the travel times within this period can be quite different, especially when the peak congestion lasts for less than two hours.

For arterials, the travel time results are closely related to (1) traffic signal timing and (2) the vehicle location in the traffic platoon during the study. In analyzing the data, if a travel time run was made at the very beginning of the two-hour period, or toward the end of the period, and the data point was significantly different than other runs, this data point was discarded. Additional travel time runs were then made during the time period when traffic congestion was more severe.

Some special conditions exist on freeway segments in the vicinity of major off-ramps. There may be different speeds in each lane of the freeway if the rightmost lanes are affected by congestion in the off-ramp. At some of the freeway-to-freeway interchanges on the CMP network, drivers may experience a different LOS in the rightmost lane or on the ramp connection than on the freeway itself. In this study, separate travel time/speed runs were made for ramps since these connections can frequently have very different characteristics from the freeways themselves. However, no separate travel time/speed runs were made for the rightmost lanes of the freeways approaching ramps. For example, LOS "F" conditions were not measured on I-880 northbound at I-238 based on traffic flow in the center lanes (consistent with the data collection methodology), nor were LOS "F" conditions measured on the connector ramp itself (beyond the gore point) from northbound I-880 to I-238, although drivers in the rightmost lane on northbound I-880 often experience significant congestion approaching the I-238 off-ramp. This may also be occurring at the I-580/I-680 interchange.

3. LEVEL OF SERVICE RESULTS

This section of the report describes the results of the surveys of freeway, arterial and ramp-to-ramp segments. Segments that are operating at Level of Service "F" are highlighted as well as segments that have changed significantly since the 2008 survey.

The full listing of peak hour speed and Level of Service results for all CMP network segments is included in the Appendix, on pages A-1 through A-22. The data are subdivided as follows:

- P.M. Freeway Segments, Pages A-1 to A-4
- P.M. Arterial Segments, Pages A-5 to A-10
- P.M. Ramps and Special Segments, Page A-11
- A.M. Freeway Segments, Pages A-12 to A-15
- A.M. Arterial Segments, Pages A-16 to A-21
- A.M. Ramps and Special Segments, Page A-22

In addition to the speed and LOS results, these tables also show the number of lanes on each segment, and the estimated average daily traffic. Each entry also shows the results of the previous study (2008) to provide a comparison. The complete field data, which shows the results of each individual travel time run and other study results, is contained in a CD titled '*Technical Compendium of Travel Time Studies – 2010*', which is available at the ACCMA offices.

P.M. PEAK PERIOD RESULTS

The official monitoring of the Alameda County CMP designated roadway system is based on the P.M. peak period level of service. Analyzing the County as a whole, the survey results show that the speeds on freeways and arterials appear to have improved since the 2008 surveys. The overall average speeds on the freeway system during the p.m. peak period increased 0.8 miles per hour between 2008 and 2010, while the average arterial speeds increased 3.0 miles per hour. The freeway corridors that are experiencing degradation in service levels are mostly due to construction activities occurring in the county or as a result of splitting longer CMP segments into shorter ones as adopted in the 2007 CMP.

LEVEL OF SERVICE "F" SEGMENTS

Table 4 lists the Level of Service "F" segments that were observed in the 2010 surveys. The surveys revealed that thirty six (36) segments are operating at Level of Service "F" during the P.M. peak period. Of these segments, twenty five (25) are on the freeway system, nine (9) are located on arterial routes, and two (2) segments are on freeway-to-freeway ramps.

Table 4: Level of Service "F" Segments, P.M. Peak Period

	CMP Route	Segment Limits	To	Jurisdiction	Length (miles)	Prior "F" (Years)	Comments	LOS Results 2008	LOS Results 2010	Run details	
1	I-80 - EB	I-80/I-580 (Merge)	Powell	Emery - Berk	0.79	91-95, 97-06,08	Grandfathered	F(20) 11.1	F(20) 16.6	Thu 3/11 4:37	Wed 3/17 4:05
										Thu 3/25 4:32	Wed 4/28 4:27
										Tue 4/27 4:42	Wed 5/19 5:04
										Tue 5/4 5:24	
2	I-80 - EB	Powell	Ashby	Emery - Berk	0.67	91-95, 97-06,08	Grandfathered	F(20) 10.4	F(20) 11.68	Same As Above	
3	I-80 - WB	Jct I-580	University	Berk-Alb	1.49			B 56	F(30) 23.7	Thu 3/11 4:03	Tue 3/16 5:33
										Thu 3/25 4:04	Tue 4/27 4:21
										Tue 4/27 4:56	Wed 4/28 4:03
										Tue 5/4 5:02	
4	I-80 - WB	University	Ashby	Emery - Berk	1.36	91-92,94-08	Grandfathered	E 31.2	F(30) 24.7	Same As Above	
5	I-80 - WB	Ashby	Powell	Emery - Berk	0.64	91-92, 94-'06	Grandfathered	F(20) 18.6	F(20) 16.6	Same As Above	
6	I-580 EB	San Ramon/ Foothill	I-680	Uninc - Pleas	0.77	08	Construction	F(20) 17.7	F(20) 12.6	Thu 3/11 4:11	Wed 3/17 4:53
										Wed 4/21 5:06	Tue 4/20 5:11
										Thu 5/13 5:31	Thu 4/22 5:36
										Tue 5/18 4:54	Thu 5/20 4:57
7	I-580 EB	I-680	Hopyard	Plea	0.76	98-'02,06-08	Construction	F(10) 9.1	F(10) 8.7	Thu 3/11 4:17	Wed 3/17 5:07
										Wed 3/31 5:15	Wed 3/31 4:02
										Tue 5/18 4:55	Thu 5/20 5:12
										Thu 5/6 4:15	Thu 5/13 5:05

	CMP Route	Segment Limits	To	Jurisdiction	Length (miles)	Prior "F" (Years)	Comments	LOS Results 2008	LOS Results 2010	Run details	
8	I-580 EB	Hopyard	Santa Rita	Plea	1.96	98-'02,06-08	Construction	F(20) 12.7	F(20) 10.8	Thu 3/11 4:24	Wed 3/17 5:07
										Wed 3/31 4:03	Wed 3/31 5:16
										Thu 5/6 4:22	Thu 5/13 5:05
										Tue 5/18 4:58	Thu 5/20 5:12
9	I-580 EB	Santa Rita	El Charro	Uninc - Pleas	1.24	02, 08	Construction	F(30) 29	F(30) 22.3	Thu 3/11 4:35	Wed 3/17 5:17
										Wed 3/31 4:12	Wed 3/31 5:28
										Thu 5/6 4:32	Thu 5/13 5:17
										Tue 5/18 5:10	Thu 5/20 5:25
10	I-580 EB	I-80	I-980	Oak	1.24	91-92,08	Grandfathered	F(30) 27.3	F(30) 25.7	Wed 3/17 5:07	Tue 3/23 4:57
										Wed 4/28 5:12	Thu 4/29 4:48
										Tue 5/4 4:07	Wed 5/5 4:13
										Wed 5/5 5:30	Thu 5/6 4:51
										Thu 5/13 4:13	
11	I-580 EB	Harrison	Lakeshore	Oak	0.69	08		F(30) 28.4	F(30) 27.0	Wed 3/17 5:12	Tue 3/23 4:49
										Wed 4/28 5:20	Thu 4/29 4:50
										Tue 5/4 4:09	Wed 5/5 4:15
										Wed 5/5 5:38	Thu 5/6 4:53
										Thu 5/13 4:17	
12	I-580 EB	Coolige	SH 13 Off	Oak	2.15			D 46.6	F(30) 31.4	Wed 3/17 5:14	Tue 3/23 4:59
										Wed 4/28 5:22	Thu 4/29 4:51
										Tue 5/4 4:09	Wed 5/5 4:16
										Wed 5/5 5:40	Thu 5/6 4:55
										Thu 5/13 4:17	
13	I-680 - NB	Rt 262/ Mission	Durham Rd	Fre	1.34		Construction	F(20) 19.7	F(20) 16.5	Same As Above	
14	I-680 - NB	Durham Rd	Washington Blvd	Fre	1.54		Construction	F(30) 26.2	F(30) 20.4	Thu 3/11 4:05	Thu 3/11 4:40
										Wed 3/17 4:06	Tue 3/23 4:09
										Tue 3/23 5:15	Wed 4/28 5:29

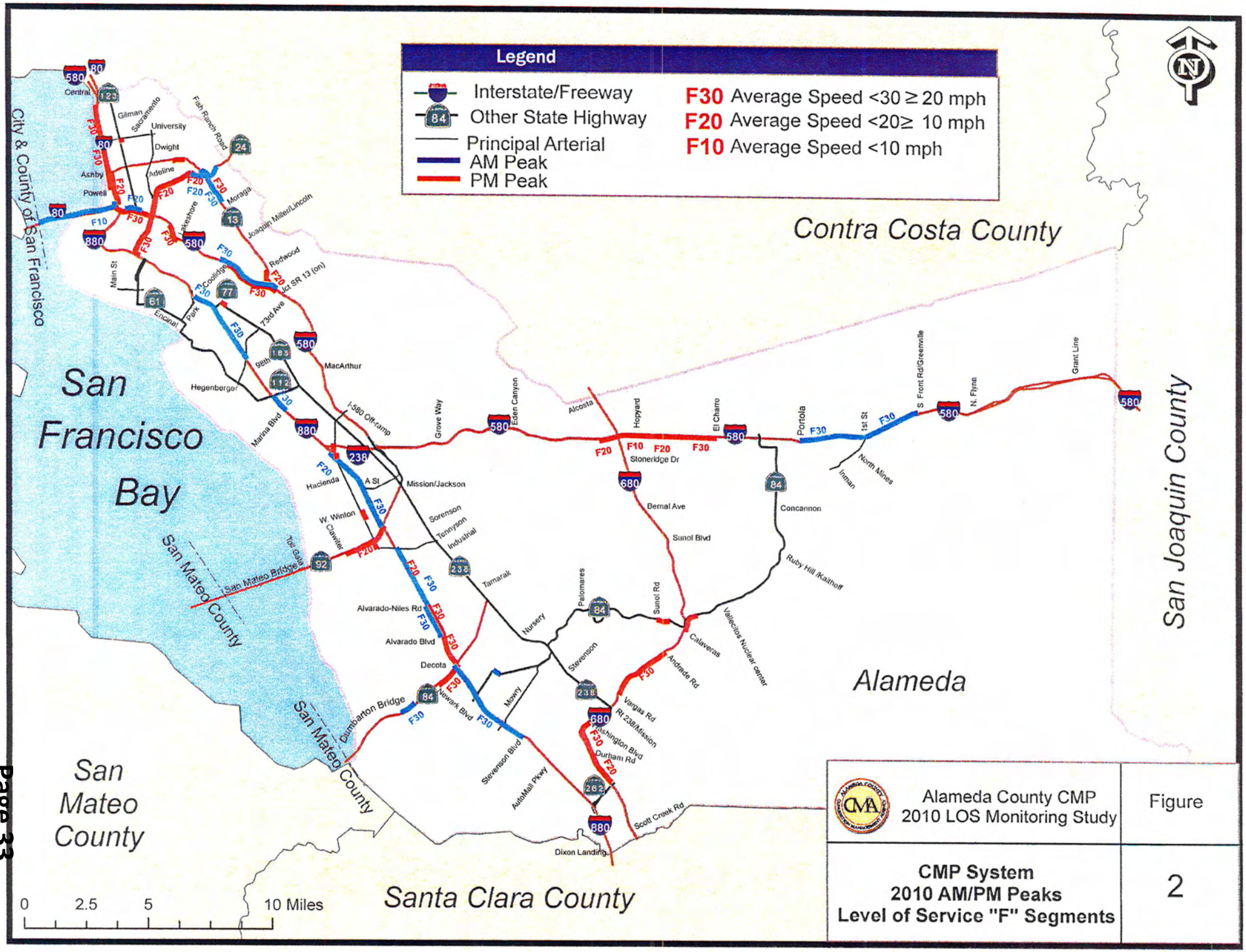
	CMP Route	Segment Limits	To	Jurisdiction	Length (miles)	Prior "F" (Years)	Comments	LOS Results 2008	2010	Run details	
15	I-680 - NB	Vargas Rd	Andrade Rd	Unin	2.64			E 37.3	F(30) 28.1	Thu 3/11 4:11	Thu 3/11 4:48
										Wed 3/17 4:11	Tue 3/23 4:15
										Tue 3/23 5:26	Wed 4/28 5:36
16	I-880 - NB	Decota	Alvarado Blvd	Fr-Uni Cty	1.17	02		E 32.6	F(30) 28.6	Tue 3/30 4:10	Tue 3/30 5:06
										Wed 3/31 4:07	Wed 3/31 5:00
										Thur 4/29 4:16	Thur 4/29 5:22
17	I-880 - NB	Alcarado Blvd	Alvarado -Niles Blvd	Fr-Uni Cty	1.17	02		E 31.3	F(30) 26.8	Same As Above	
18	I-880 - NB	Alv-Niles	Tennyso n	Un Cty - Hay	2.65	00-02,06	Construction	F(30) 23.2	F(20) 17.7	Same As Above	
19	I-980 - EB	I-880	SR 24 @ 580	Oak	2.32	91	Grandfathered	C 53.4	F (30) 29.7	Tue 3/16 4:35	Wed 3/17 4:55
										Tue 3/23 4:29	Wed 3/24 4:05
										Thu 4/22 4:02	Thu 4/22 4:29
										Thu 5/20 5:17	Wed 5/26 5:01
20	SR 13 - NB	Moraga Ave	Hiller (Sig)	Oak	1.57	06		E 40.7	F(30) 23.8	Thu 3/18 5:03	Tue 3/23 4:05
										Wed 3/24 4:38	Wed 3/24 5:35
										Tue 4/20 5:45	Wed 4/21 5:31
21	SR 13 - SB	Redwood	Jct I-580 (EB Merge)	Oak	0.89	08		F(30) 21.9	F(20) 13.4	Thu 3/11 5:33	Thu 3/18 4:51
										Wed 3/24 4:25	Wed 3/24 5:16
										Tue 4/20 5:32	Wed 4/21 5:18
22	SR 24 - EB	Jct I-580 (on)	Broadwa y/SR 13	Oak	2.08	91-'97,'02,06,08	Grandfathered	F(20) 25.6	F(20) 15.8	Tu 3/16 4:42	Wed 3/17 5:00
										Tue 3/23 4:31	Wed 3/24 4:07
										Thu 4/22 4:04	Thu 4/22 4:32
										Thu 5/20 5:26	Wed 5/26 5:07
23	SR 24 - EB	Broadway/ SR 13	Caldecot t (enter)	Oak	1.41	91-'97,'02,06,08	Grandfathered / Construction	F(20) 16.9	F(20) 14.5	Tu 3/16 4:53	Wed 3/17 5:09
										Tue 3/23 4:39	Wed 3/24 4:09
										Thu 4/22 4:08	Thu 4/22 4:39
										Thu 5/20 5:38	Wed 5/26 5:17

	CMP Route	Segment Limits	To	Jurisdiction	Length (miles)	Prior "F" (Years)	Comments	LOS Results 2008	2010	Run details	
24	SR 84 - EB	Newark Blvd/Arder	I-880 NB (off)	Newark	0.97	08		F (20) 15.8	F (30) 26.9	Tue 3/16 4:01	Wed 3/17 5:24
										Wed 3/24 5:35	Thu 3/25 4:34
										Wed 3/31 4:58	Tue 5/4 4:36
										Wed 5/5 5:38	Wed 5/19 5:03
										Thu 5/27 5:10	
25	SR 92 - EB	Clawiter	I-880	Hay	2.10	91-92,94-'95,97-'02,06	Grandfathered / Construction	F(20) 10.5	F(20) 10.0	Wed 3/17 4:19	Thu 3/18 4:46
										Wed 3/31 4:31	Wed 3/31 5:28
										Tue 4/27 4:31	Tue 4/27 5:15
										Thu 5/13 5:11	
26	Hesperian - NB	La Playa	W. Winton Ave	Hayward	0.44	91-02,06, 08	Grandfathered	F 5.2	F 5.6	Wed 3/17 4:41	Thu 3/18 4:43
										Thu 4/1 4:14	Thu 4/1 5:41
										Tue 4/27 5:46	Tue 5/4 4:12
										Tue 5/4 5:15	
27	Hesperian - NB	Grant	Lewelling	Unincorporated	0.28	00, 04 06-08	Construction	F 8.6	F 8.1	Wed 3/17 4:50	Thu 3/18 4:53
										Thu 4/1 4:26	Thu 4/1 5:57
										Tue 4/27 5:56	Tue 5/4 4:25
										Tue 5/4 5:25	
28	Hesperian - SB	Springlake	Lewelling	Unincorporated	0.40	00		E 11.9	F 8.1	Wed 3/17 4:05	Thu 3/18 4:05
										Thu 3/25 5:07	Thu 4/1 5:04
										Tue 5/4 4:40	Tue 5/4 5:39
29	Hesperian - SB	SH 92 - WB	Tennyson	Hayward	0.47	08	Construction	F 9.7	F 11.0	Wed 3/17 4:18	Thu 3/18 4:21
										Thu 3/25 5:26	Thu 4/1 5:19
										Tue 5/4 4:52	Tue 5/4 5:55
30	SR 13 Ashby - EB	College	Domingo	Berkeley	0.50	91, 00, 04	Grandfathered	D 9.9	F 6.5	Thu 3/11 5:21	Thu 3/18 4:38
										Wed 3/24 4:14	Wed 3/24 5:07
										Tue 4/20 5:19	Wed 4/21 5:08
										Thu 6/10 5:05	
31	SR 84 - EB	Sunol Rd	Plea-Sunol Rd	Fremont	0.53	08		F 5.2	F 4.7	Tue 3/16 4:23	Wed 3/12 5:44
										Thu 3/25 4:55	Tue 5/4 4:54
										Wed 5/19 5:27	Thu 5/27 5:31

	CMP Route	Segment Limits	To	Jurisdiction	Length (miles)	Prior "F" (Years)	Comments	LOS Results 2008	LOS Results 2010	Run details	
32	SR 84 - EB	SE 84 (off)/ I-680	Vallecitos Ln	Unincorporated	1.07	02-04, 06-'08	Construction	F 23.6	F 11.7	Tue 3/16 5:46	Wed 3/17 5:43
										Tue 3/23 4:42	Wed 3/24 5:21
										Tue 3/30 4:44	Tue 5/4 5:01
										Thu 5/27 5:31	
33	SR 123 San Pablo - NB	Allston	University	Berkeley	0.20	98, 00, 06		E 8.8	F 5.8	Tue 4/20 4:59	Thu 4/29 5:01
										Thu 4/29 5:41	Wed 5/5 5:27
										Tue 5/11 4:48	Wed 5/12 5:33
										Thu 5/13 4:08	
34	SR 185 (14th) - NB	46th St.	42nd	Oakland	0.26	08	Construction	F 7.3	F 7.3	Tue 3/16 5:20	Tue 3/30 4:33
										Thu 4/1 5:52	Tue 5/4 5:41
										Wed 5/5 5:04	Tue 5/11 4:12
										Tue 5/11 4:41	Wed 5/12 5:42
35	I-880/SR 260 Connection	SR-260 EB	I-880 NB	Oak	1	98,'08	Construction	F 13.3	F 15.7	Tue 6/8 6:02	Tue 6/8 6:02
										Wed 6/9 4:27	Wed 6/9 6:01
										Wed 6/9 4:13	Wed 6/9 4:05
										Thu 6/10 5:35	Thu 6/10 4:53
36	SR 13/SR 24 Interchange	SR-13 NB	SR -24 EB	Oak	1	92-04, 06, 08	Construction	F 6.2	F 9.8	Thu 5/20 4:09	Tue 5/18 4:07
										Tue 5/18 4:12	Thu 5/20 4:20
										Wed 5/19 4:30	Wed 5/19 4:38

Note: Vehicle Hours of delay estimation assumes a congested speed of 35 mph or less and freeway lane capacity of 2,200 vplph consistent with Caltrans' and MTC's assumptions.
New LOS F - The CMP segment is functioning at LOS F for the first time.

This page intentionally left blank


Legend
Interstate/Freeway
Other State Highway
Principal Arterial
AM Peak
PM Peak
F30 Average Speed <30 ≥ 20 mph
F20 Average Speed <20≥ 10 mph
F10 Average Speed <10 mph
Contra Costa County
San Joaquin County
Alameda
Santa Clara County
San Mateo County
San Francisco Bay
City & County of San Francisco
0 2.5 5 10 Miles
Alameda County CMP
2010 LOS Monitoring Study
Figure
CMP System
2010 AM/PM Peaks
Level of Service "F" Segments
2

LOS "F" Segments (non-grandfathered) – P.M. Peak

A total of twenty five (25) segments, sixteen (16) freeway segments, seven (7) arterial segments and two (2) freeway-to-freeway connectors operated at LOS "F" during the P.M. peak period in 2010 in this category. Five (5) of these twenty five (25) segments are operating at LOS F for the first time. The details are shown in the following table:

Freeways and Ramps

	CMP Route	Segment Limits	Jurisdiction	Comments
1	I-80 - WB	Jct I-580 to University	Berkeley-Albany	New LOS F
2	I-580 EB	San Ramon/ Foothill to I-680	County - Pleasanton	Construction
3	I-580 EB	I-680 to Hopyard	Pleasanton	Construction
4	I-580 EB	Hopyard	Pleasanton	Construction
5	I-580 EB	Santa Rita to El Charro	County - Pleasanton	Construction
6	I-580 EB	Harrison to Lakeshore	Oakland	
7	I-580 EB	Coolidge to SH 13 Off	Oakland	New LOS F
8	I-680 - NB	Rt 262/ Mission to Durham Rd	Fremont	Construction/ New LOS F
9	I-680 - NB	Durham Rd to Washington Blvd	Fremont	Construction/ New LOS F
10	I-680 - NB	Vargas Rd to Andrade Rd	County	New LOS F
11	I-880 - NB	Decoto to Alvarado Blvd	Fremont -Union City	
12	I-880 - NB	Alvarado Blvd to Alvarado-Niles Blvd	Fremont -Union City	
13	I-880 - NB	Alv-Niles to Tennyson	Union City - Hayward	Construction
14	SR 13 - SB	Moraga Ave to Hiller (Sig)	Oakland	
15	SR 13 - SB	Redwood to Jct I-580 (EB Merge)	Oakland	
16	SR 84 - EB	Newark Blvd/Arder to I-880 NB (off)	Newark	
17	I-880/SR 260 Connection	SR-260 EB to I-880 NB	Oakland	Construction
18	SR 13/SR 24 Interchange	SR-13 NB to SR 24 EB	Oakland	Construction

Arterials

	CMP Route	Segment Limits	Jurisdiction	Comments
19	Hesperian - NB	Grant to Lewelling	County	Construction
20	Hesperian - SB	Springlake to Lewelling	County	
21	Hesperian - SB	SH 92 - WB to Tennyson	Hayward	Construction
22	SR 84 - EB	Sunol Rd to Plea-Sunol Rd	Fremont	
23	SR 84 - EB	SR 84 (off)/I-680 to Vallecitos Ln	County	Construction
25	SR 185 (14th) - NB	46th St. to 42nd	Oakland	Construction

LOS "F" Segments Included in 1991 CMP Baseline ("Grandfathered")

The remaining eleven (11) segments operating at LOS "F" during the 2010 P.M. peak period were also LOS "F" during the 1991 CMP baseline year and are therefore grandfathered. The details of these segments are shown below:

	CMP Route	Segment Limits	Jurisdiction
1	I-80 - EB	I-80/I-580 (Merge) to Powell	Emeryville - Berkeley
2	I-80 - EB	Powell to Ashby	Emeryville - Berkeley
3	I-80 - WB	University to Ashby	Emeryville - Berkeley
4	I-80 - WB	Ashby to Powell	Emeryville - Berkeley
5	I-580 EB	I-80 to I-980	Oakland
6	I-980 - EB	I-880 to SR 24 @ 580	Oakland
7	SR 24 - EB	Jct I-580 (on) to Broadway/SR 13	Oakland
8	SR 24 - EB	Broadway/ SR 13 to Caldecott (enter)	Oakland
9	SR 92 - EB	Clawiter to I-880	Hayward
10	Hesperian - NB	La Playa to W. Winton Ave	Hayward
11	SR 13 Ashby - EB	College to Domingo	Berkeley

Improved Segments – P.M. Peak

Ten segments that were operating at LOS F in the 2008 surveys have improved in 2010. The segments are listed below. In the 2008 LOS Monitoring Study, there were 13 P.M. peak period segments that improved from LOS "F" conditions.

Segments that were previously designated as LOS "F" in 2008 and have improved in the 2010 surveys (10 locations)

	CMP Route	Direction	Segment Limits From	To	2008 LOS (Speed)	2010 LOS (Speed)	Prior LOS F
			P.M. PEAK PERIOD				
1	I-80	EB	Toll Plaza	I-580 SB Merge	F (28.6)	C (54.2)	93-'02, 06-08
2	I-80	EB	Ashby	University	F(20)	E(31.7)	91-95,97-08
3	I-80	EB	Jct I-580 (off)	Central (on)	F(26.7)	E(39.1)	91-92,96-97,02,06-08
4	I-238	WB	I-580	I-880	F(24.8)	A(61.8)	97-08
5	I-880	SB	Hegenberger	SR 112/Davis	F (24.5)	E(37.6)	91-92,08
6	SR 84	EB	Thornton	Newark Blvd/ Ardenwood Blvd	F(25.5)	A(65.8)	08
7	I-580/I-680	Connector	I-580 WB	I-680 NB	F(19.2)	B(31.3)	08
8	Hesperian	NB	Tennyson	SH 92-WB	F(8.6)	E(15.0)	06-08
9	Hesperian	SB	14th	Fairmont	F(8.6)	E(12.4)	91,95,97,08
10	SR 123 San Pablo	NB	Marin	Washington	F(6.2)	B(24.1)	08

Vehicle Hours of Delay (VHD) for LOS F freeway segments

As requested by the CMA Board in 2006, Table 4 also includes vehicle hours of delay for the LOS F freeway segments. Consistent with the Caltrans and MTC definitions, congested speed is assumed to be 35 miles per hour and less and the bottleneck capacity is assumed to be 2,200 vehicles per hour per lane. Since the average speed observed in the LOS Monitoring Study is based on the floating car runs over the 2-hour peak period, for VHD estimation purposes, congestion was assumed to occur only in this 2-hour peak period (Caltrans and MTC measure the actual congestion period by conducting the floating car runs beyond this 2-hour period). The delay per vehicle per lane was calculated by 1) using the difference between how long it takes to travel a CMP LOS F network segment at 35 mph (congested threshold speed per Caltrans and MTC) and the actual speed that was observed in the travel time survey and 2) multiplying the difference in time estimated by the number of lanes, capacity and the assume congestion duration of 2 hours. The estimated total vehicle hours of delay on the LOS F freeway segments during the evening peak period is 15,858 hours, which is an increase of 3,307 hours from the vehicle hours of delay observed in 2008.

AM PEAK PERIOD RESULTS

Based on the direction of the CMA Board in 2004, all of the segments are being monitored for afternoon and morning peak periods starting 2006. Previously (since 1994), the A.M. peak data was collected only for selected segments that were considered to be the most critical freeway segments during the morning commute peak hours. Between 1994 and 2000, 23 A.M. peak period segments were studied. The number of segments increased to 45 in 2004 and to 287 in 2006. By splitting the longer CMP network segments into shorter segments, the number of segments increased to 372 in 2008. The study methodology is the same as for the P.M. studies.

The results of the A.M. peak period studies are not used to determine CMP conformity findings, but only to provide supplemental information for use by the CMA and as input for the Countywide Travel Demand Model.

LOS "F" Segments in A.M. Peak Period

There are total 21 segments, 17 freeway segments, 3 arterial segments and one freeway to freeway connector, which are operating at LOS F during the A.M. peak period. Out of these total 21 LOS F segments, 12 segments performed at LOS F previously. Of the remaining 9 segments that are operating at LOS F for the first time, 4 of them appeared to have been impacted by construction activities.

Freeways and Ramps

	CMP Route	Segment Limits From	To	Jurisdiction	Comments
1	I-80 - WB	I-580 Split to	Toll Plaza	Oakland	Construction
2	I-80 - WB	Toll Plaza	SF County	Oakland	Construction
3	I-580 - WB	SH 13 Off	Fruitvale	Oakland	
4	I-580 - WB	SH-24 On-ramp	I-80/580 Split	Oakland	
5	I-580 - WB	Greenville Rd	1st St	Livermore-County	Construction
6	I-580 - WB	1st St	Portola Ave.	Livermore	Construction
7	I-880 - NB	Alv-Niles	Tennyson	Union City-Hayward	Construction
8	I-880 - NB	Marina Blvd	SR 112/Davis	Oakland	New LOS F
9	I-880 - NB	Hegenberger	High/42	Oakland	New LOS F /Construction
10	I-880 - NB	High/42	23rd (1st on)	Oakland	New LOS F /Construction

11	I-880 - SB	I-238 (Marina before 06)	A St	San Leandro-County	Construction
12	I-880 - SB	A St	Rt 92	Hayward	Construction
13	I-880 - SB	Alvarado-Niles	Alvarado	Union City -Fremont	New LOS F
14	I-880 - SB	Decoto	Stevenson	Union City -Fremont	New LOS F
15	SR 13 - NB	Morage Ave	Hiller (sig)	Oakland	New LOS F
16	SR 24 - EB	Broadway/SR 13	Caldecott (enter)	Oakland	Construction
17	SR 84 - WB	Paseo Padre Pkwy	Toll Gate	Newark	
18	SR-13/SR-24	SR-13 NB	SR-24 EB	Oakland	Construction

Arterials

	CMP Route	Segment Limits		Jurisdiction	Comments
		From	To		
19	Hesperian - NB	Grant	Lewelling	County	New LOS F /Construction
20	SR 84/Fremont (Fre) - WB	Peralta	Thorton	Fremont	New LOS F
21	SR 185 (14th) - NB	46th St	42nd	Oakland	New LOS F /Construction

IMPROVED SEGMENTS

Nine segments that operated at LOS "F" during the 2008 surveys but operated at an improved Level of Service in the 2010 surveys. In 2008 LOS Monitoring study, there were 2 A.M. peak period segments that improved from LOS "F" conditions in 2006.

Segments at LOS "F" in 2008 and not in 2010

A.M. PEAK PERIOD							
1	I-80	WB	Central	Jct -I580	F(24.6)	E(37.0)	97,00-02,06-08
2	I-80	WB	Jct I-580	University	F(25.6)	E(33.3)	97,00-02,06-08
3	I-238	WB	I-580	I-880	F(15.9)	E(32.1)	97-08
4	I-580	WB	Portola	SR 84/Airway Blvd.	F(29.4)	D(42.4)	04,08
5	I-880	SB	Automall Pkwy	Rte 262/Mission	F(22.0)	C(54.3)	04-08
6	SR 260/I-880	Connector	SR 260 EB	I-880 NB	F(12.6)	E(18.8)	
7	Hesperian	NB	14th	Fairmont	F(9.7)	E(12.9)	
8	SR 84	EB	Sunol Rd	Plea-Sunol Rd	F(5.5)	D(19.2)	
9	SR 262 Mission	WB	I-680 NB	I-880 SB	F(11.0)	D(21.3)	

Vehicle Hours of Delay (VHD) estimation for LOS F freeway segments

Similar to the P.M peak period LOS F segments, vehicle hours of delay (VHD) was estimated for the freeway segments operating at LOS F during the A.M. peak period. The VHD information is shown in Table 5. The estimated total vehicle hours of delay on the LOS F freeway segments during the morning peak period is 10,259 hours, which is 2,975 hours lower than the vehicle hours of delay measured in 2008 surveys.

Table 5: Level of Service "F" Segments, A.M. Peak Period

	CMP Route	Segment Limits		Jurisdiction	Length	Prior LOS F	Veh. Hrs. of Delay	Comments	LOS Results		Run details	
		From	To		(miles)				2008	2010		
1	I-80 - WB	I-580 Split	Toll Plaza	Oak	1.20	97-08	2505		F(10) 4.7	F(10) 8.1	Thu 3/11 7:08	Tue 3/16 7:09
											Wed 3/24 7:07	Thu 3/25 7:09
											Wed 4/21 8:32	Tue 5/4 8:11
2	I-80 - WB	Toll Plaza	SF County	Oak	2.00	97-08	2026		F(20) 10.9	F(20) 13.4	Thu 3/11 7:14	Tue 3/16 7:14
											Wed 3/24 7:29	Thu 3/25 7:29
											Wed 4/21 8:38	Tue 5/4 8:22
3	I-580 - WB	SH 13 Off	Fruitvale	Oak	2.36	08	502		F(30) 25.0	F(30) 24.6	Tue 3/16 8:37	Wed 3/17 8:27
											Tue 3/23 8:06	Wed 3/24 8:46
											Thu 3/25 8:04	Thu 4/22 8:10
4	I-580 - WB	SH-24 On-ramp	I-80/580 Split	Oak	0.69	02,06,08	566		F(30) 20.7	F(20) 13.3	Tue 3/16 8:51	Wed 3/17 8:39
											Tue 3/23 8:21	Wed 3/24 8:57
											Thu 3/25 8:15	Thu 4/22 8:19
5	I-580 - WB	Greenville Rd	1st St	Liv-Uninc	2.30	04,08	244		F(30) 24.0	F(30) 28.9	Tue 3/16 7:40	Wed 3/31 8:36
											Th 3/18 7:34	Wed 4/21 7:42
											Tue 3/23 8:40	Th 6/10 7:30
											Wed 3/31 7:10	
6	I-580 - WB	1st St	Portola Ave.	Liv	2.52	08	241		F(20) 16.8	F(30) 29.4	Same as above	
7	I-880 - NB	Alv-Niles	Tennyson	Un Cty – Hay	2.65	06,08	722		F(30) 26.2	F(30) 22.7	Thu 3/18 7:13	Thu 3/18 8:36
											Tue 3/23 8:31	Wed 4/28 7:42
											Wed 3/31 7:44	Tue 5/11 7:42
											Thu 4/29 8:27	Thu 3/25 8:24
8	I-880 - NB	Marina Blvd	SR 112/Davis	Oak	0.79		159	New LOS F	D 47.2	F(30) 25.0	Thu 3/11 7:46	Thu 3/18 7:23
											Tue 3/23 8:46	Wed 3/31 7:42
											Wed 3/31 8:39	Tue 4/27 7:50
											Tue 5/4 7:38	Thu 3/25 8:24

Page 40

	CMP Route	Segment Limits		Jurisdiction	Length	Prior LOS F	Veh. Hrs. of Delay	Comments	LOS Results		Run details	
		From	To		(miles)				2008	2010		
9	I-880 - NB	Hegenberger	High/42	Oak	2.47		424	New LOS F	D 47.1	F(30) 26.1	Thu 3/11 7:49	Thu 3/18 7:26
											Tue 3/23 8:53	3/31 Wed 7:46
											Wed 3/31 8:42	Tue 4/27 7:54
											Tue 5/4 7:42	Thu 3/25 8:36
10	I-880 - NB	High/42	23rd (1st on)	Oak	1.06		216	New LOS F	E 38.9	F(30) 24.9	Thu 3/11 7:53	Thu 3/25 8:43
											Wed 3/31 7:48	Wed 3/31 8:48
											Tue 4/27 8:06	Tue 5/4 7:45
11	I-880 - SB	I-238 (Marina before 06)	A St	SL-Uninc	2.03	06-08	860		F(30) 24.1	F(20) 19.0	Thu 3/11 7:16	Thu 3/11 8:30
											Thu 3/18 7:39	Wed 3/24 8:08
											Thu 3/25 7:50	Wed 3/31 7:15
											Wed 3/31 8:15	Tue 4/27 7:17
12	I-880 - SB	A St	Rt 92	Hay	1.81	97,98,00-02,08	173		E 32	F(30) 29.4	Thu 3/11 7:25	Thu 3/11 8:39
											Thu 3/18 7:45	Wed 3/24 8:14
											Thu 3/25 7:58	Wed 3/31 7:20
											Wed 3/31 8:20	Tue 4/27 7:21
13	I-880 - SB	Alvarado-Nile	Alvarado	UC-Fre	1.37		94	New LOS F	D 45.6	F(30) 30.8	Thu 3/18 7:57	Wed 3/24 8:22
											Wed 3/31 7:11	Wed 3/31 8:07
											Wed 4/28 7:07	Thu 4/29 7:53
											Tue 5/11 7:14	
14	I-880 - SB	Decoto	Stevenson	UC-Fre	4.07		272	New LOS F	D 47.4	F(30) 30.9	Thu 3/18 8:03	Wed 3/24 8:28
											Wed 3/31 7:14	Wed 3/31 8:13
											Wed 4/28 7:11	Thu 4/29 7:58
											Tue 5/11 7:17	
15	SR 13 - NB	Morage Ave	Hiller (sig)	Oak	1.57		85	New LOS F	E 34.4	F(30) 28.8	Thu 3/11 8:36	Wed 3/17 7:24
											Tue 3/23 7:08	Wed 3/24 7:26
											Wed 3/24 8:21	Thu 4/15 7:33
16	SR 24 - EB	Broadway/ SR 13	Caldecott (enter)	Oak	1.41	02,06-08	725		F(30) 15.2	F(20) 17.3	Tue 3/16 7:29	Wed 3/17 7:21
											Tue 3/23 7:50	Wed 3/24 7:19
											Thu 4/15 7:05	Thu 4/15 7:23
											Thu 4/22 8:17	Wed 5/26 8:49

	CMP Route	Segment Limits		Jurisdiction	Length	Prior LOS F	Veh. Hrs. of Delay	Comments	LOS Results		Run details	
		From	To		(miles)				2008	2010		
17	SR 84 - WB	Paseo Padre Pkwy	Toll Gate	New	0.75	02	165		D 41.9	F(30) 22.1	Tue 3/16 7:47	Thu 3/18 7:14
											Thu 3/25 7:14	Thu 3/25 8:17
											Tue 3/30 7:42	Thu 4/22 7:58
											Thu 4/22 8:52	Tue 4/27 7:40
											Tue 4/27 8:41	Wed 5/5 7:51
18	Hesperian - NB	Grant	Lewelling	Unin	0.28			New LOS F	E 11.8	F 10	Wed 3/17 8:04	Thu 3/18 8:31
											Thu 3/25 8:21	Thu 4/1 8:21
											Wed 4/21 7:37	Wed 4/21 8:28
											Tue 5/11 7:26	
19	SR 84/Fremont (Fre) - WB	Peralta	Thorton	Fre	0.33			New LOS F	E 10.6	F 9.8	Tue 3/16 7:44	Thu 3/18 7:13
											Thu 3/25 7:13	Thu 3/25 8:16
											Tue 3/30 7:40	Thu 4/22 7:56
											Thu 4/22 8:49	Tue 4/27 7:39
											Tue 4/27 8:40	Wed 5/5 7:50
20	SR 185 (14th) - NB	46th St	42nd	Oak	0.26			New LOS F	E 10.9	F 7.2	Thu 4/1 7:27	Thu 4/1 8:35
											Tue 4/27 8:13	Tue 4/27 8:46
											Wed 4/28 7:23	Wed 4/28 8:39
21	SR-13/SR-24	SR-13 NB	SR-24 EB	Oak	0.32	08	280		F 6.2	F 4.4	Thu 4/15 8:33	Wed 4/14 7:20
											Wed 4/14 7:28	Thu 4/15 8:21
											Wed 4/14 7:15	

Note: Vehicle Hours of delay estimation assumes a congested speed of 35 mph or less and freeway lane capacity of 2,200 vplph consistent with Caltrans' and MTC's assumptions.
New LOS F - The CMP segment is functioning at LOS F for the first time.
New – New CMP segments adopted in the 2007 CMP by splitting the longer CMP segments into shorter ones.

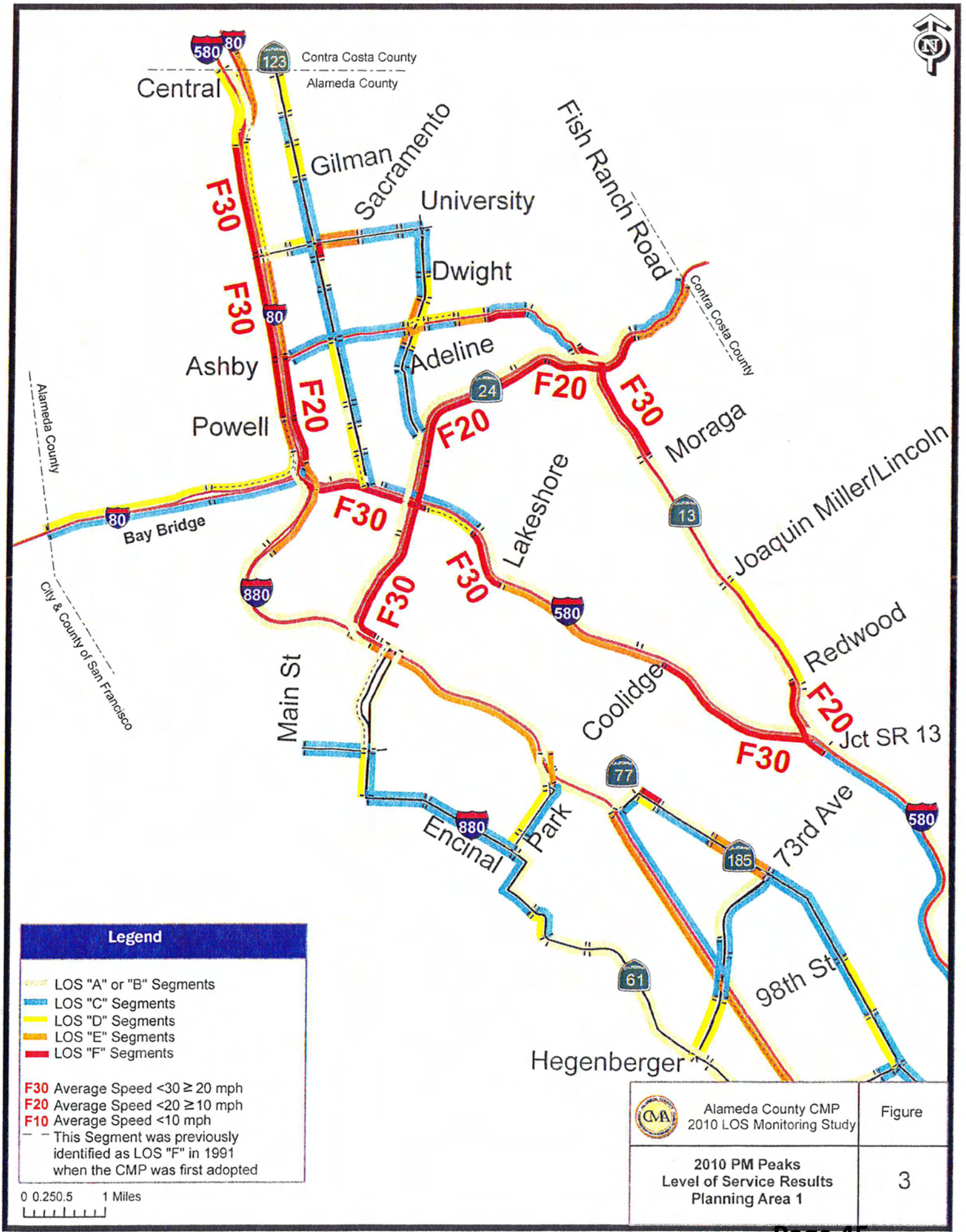
4. SYSTEM OBSERVATIONS

The systemwide statistics for the county arterials and freeways are shown in Table 6. Based on an average of all CMP roads in the County, the overall average speeds increased system wide during both afternoon and morning peak periods. The overall average speeds increased on freeways by 0.8 miles per hour and on arterials by 3.0 miles per hour during the p.m. peak period. The a.m. peak period experienced an increase of 1.5 mph on freeways and 1.0 mph on arterials.

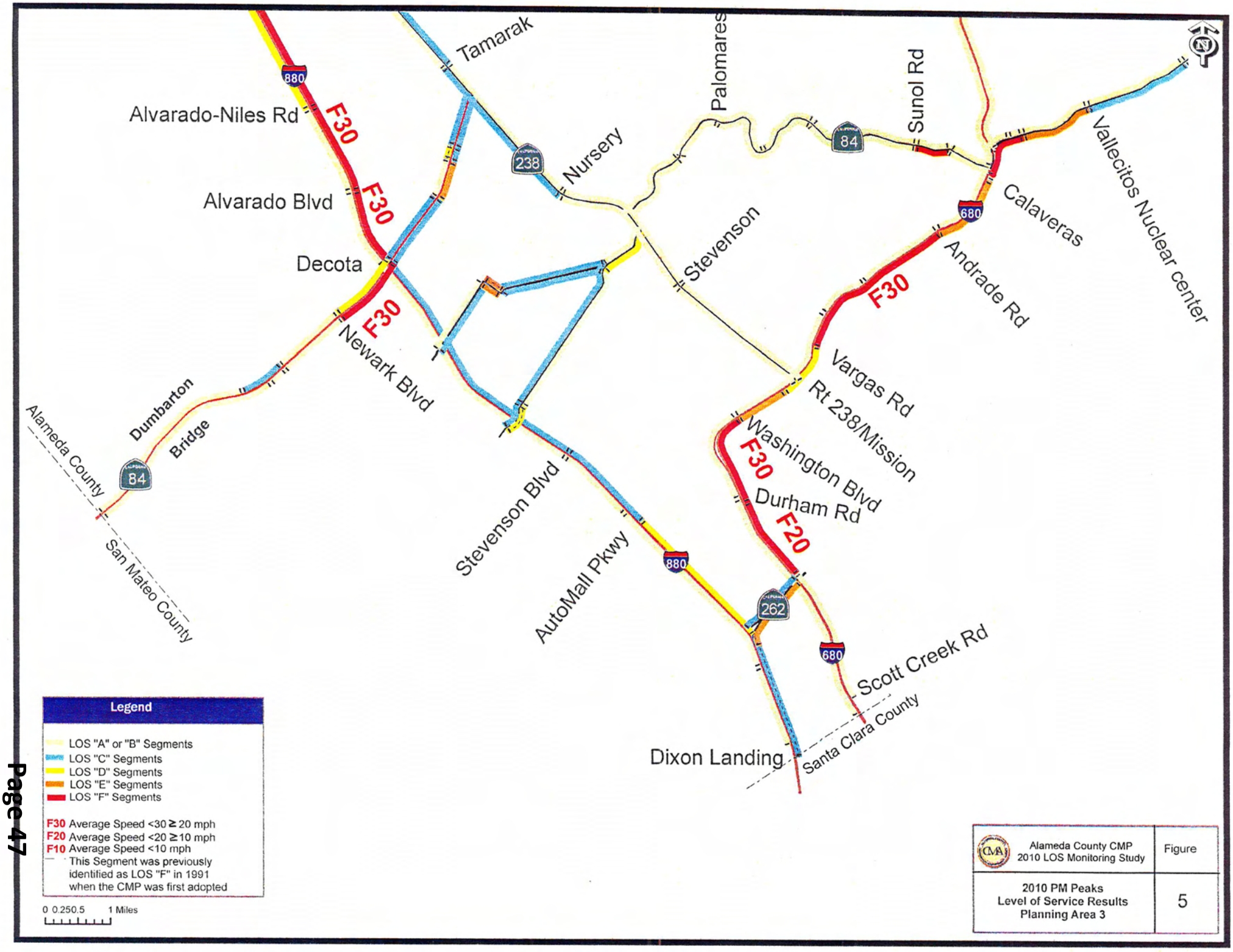
Table 6: Average Vehicle Speeds in Peak Hours on Alameda County CMP Roadways

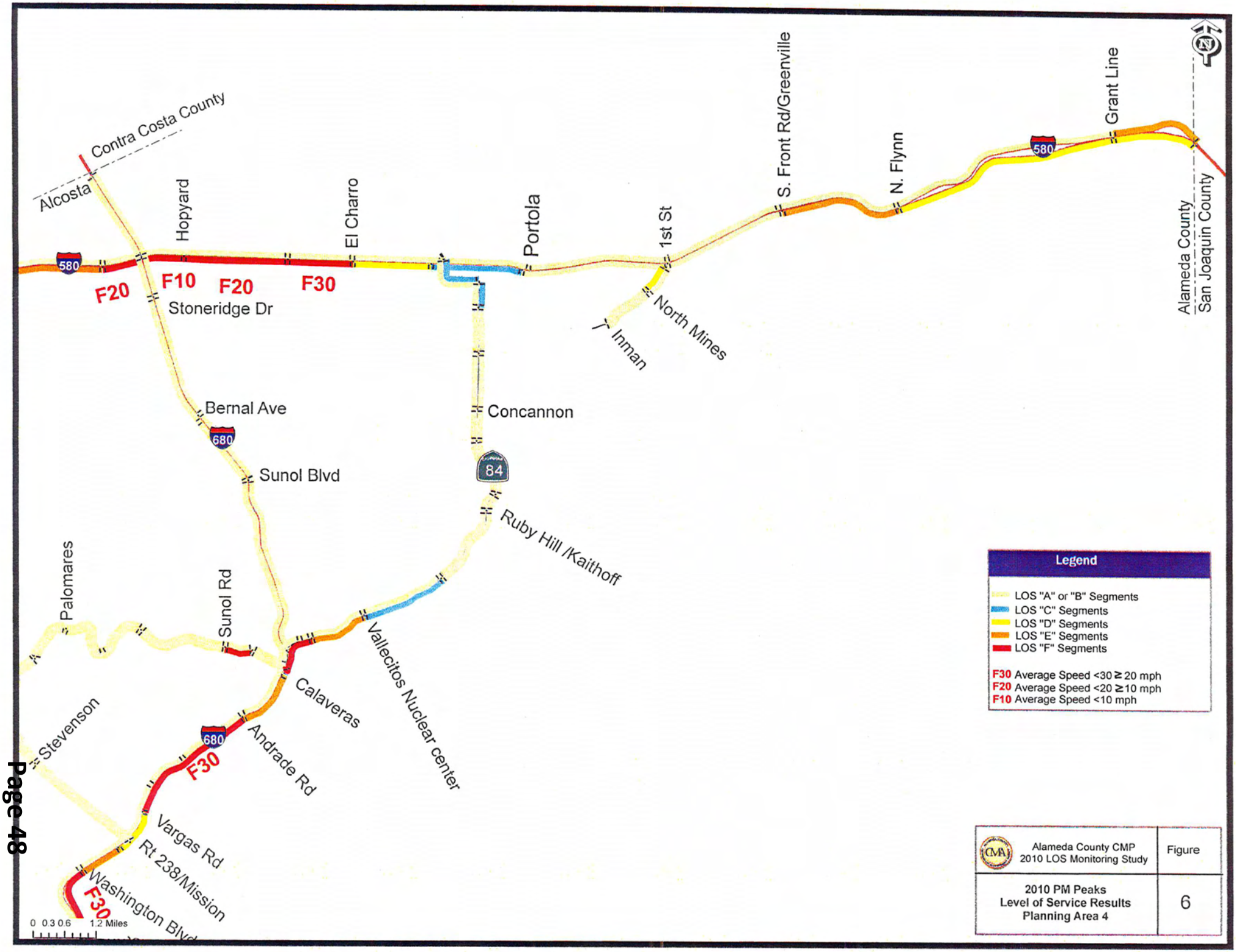
	2008 Results	2010 Results
Freeways P.M.	51.0 mph	51.8 mph
Arterials P.M.	25.7 mph	28.7 mph
Freeways A.M.	52.4 mph	53.4 mph
Arterials A.M.	26.5 mph	28.0 mph

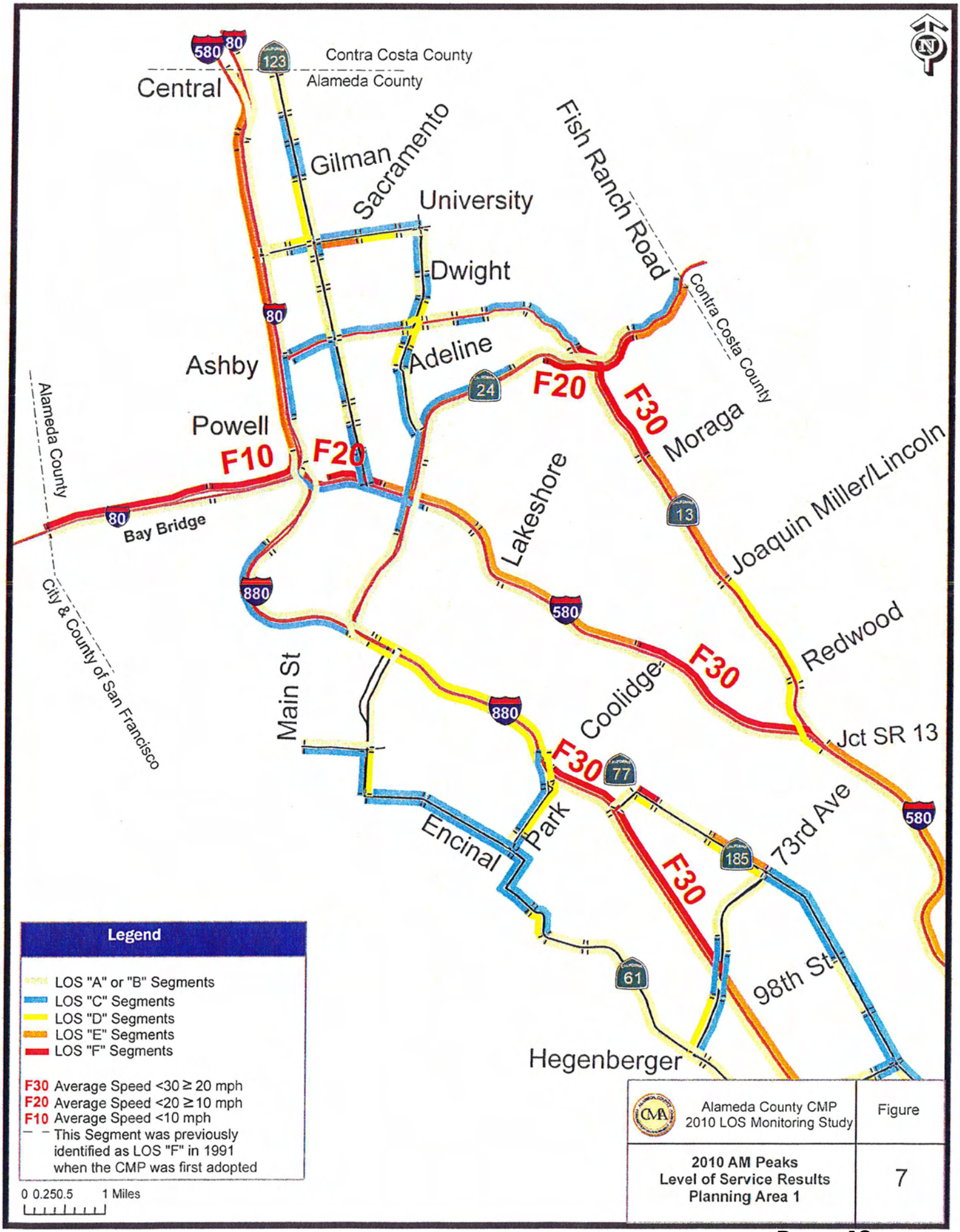
Figures 3 through 10 show the results of the P.M. and A.M. peak travel time runs and the resulting LOS for each of the segments on the CMP designated system by roadway and by jurisdiction. These figures each portray a sub-area of the County which generally corresponds to the County planning areas. (See Appendix tables on pages A-1 through A-26 for a full listing of all results).


Central
Contra Costa County
Alameda County
Gilman
Sacramento
University
Dwight
Fish Ranch Road
Contra Costa County
Ashby
Powell
Adeline
Alameda County
Bay Bridge
City & County of San Francisco
Lakeshore
Moraga
Joaquin Miller/Lincoln
Main St
Coolidge
Redwood
Jct SR 13
Encinal
Park
73rd Ave
98th St
Hegenberger
F30
F20
F10
Legend
LOS "A" or "B" Segments
LOS "C" Segments
LOS "D" Segments
LOS "E" Segments
LOS "F" Segments
F30 Average Speed <30 ≥ 20 mph
F20 Average Speed <20 ≥ 10 mph
F10 Average Speed <10 mph
This Segment was previously identified as LOS "F" in 1991 when the CMP was first adopted
0 0.250.5 1 Miles
Alameda County CMP
2010 LOS Monitoring Study
Figure
2010 PM Peaks
Level of Service Results
Planning Area 1
3

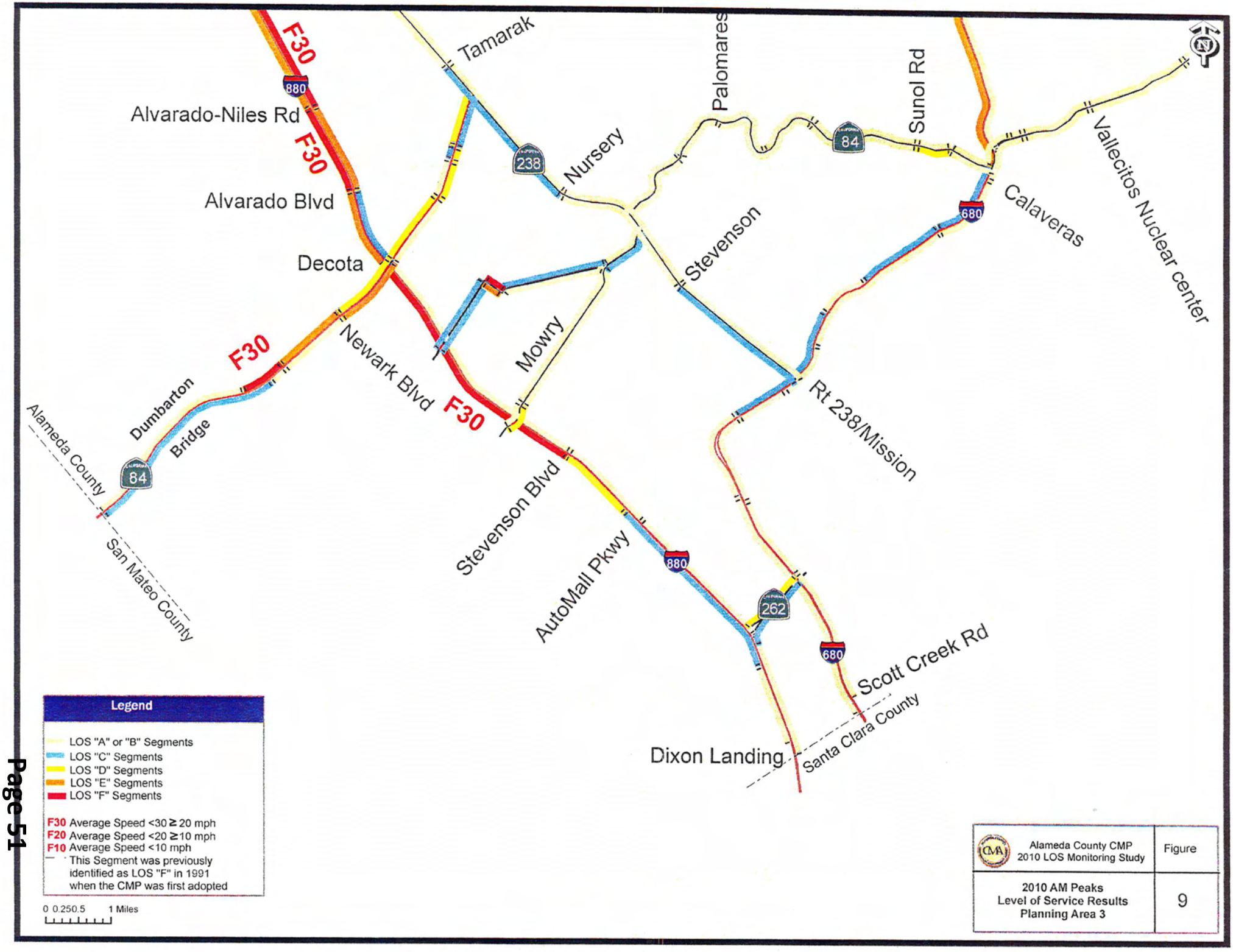

880
98th St
MacArthur
580
Hegenberger
61
112
185
I-580 Off-ramp
Grove Way
Marina Blvd
238
580
238
Hacienda
A St
Mission/Jackson
880
W. Winton
Sorenson
Clawiter
Toll Gate
F20
Industrial
Alameda County
San Mateo County
San Mateo Bridge
92
F20
880
Alvarado-Niles Rd
F30
F30
Alvarado Blvd
Legend
LOS "A" or "B" Segments
LOS "C" Segments
LOS "D" Segments
LOS "E" Segments
LOS "F" Segments
F30 Average Speed <30 ≥ 20 mph
F20 Average Speed <20 ≥ 10 mph
F10 Average Speed <10 mph
This Segment was previously identified as LOS "F" in 1991 when the CMP was first adopted
0 0.250.5 1 Miles
Alameda County CMP
2010 LOS Monitoring Study
Figure
2010 PM Peaks
Level of Service Results
Planning Area 2
4


Alvarado-Niles Rd
Alvarado Blvd
Decota
Newark Blvd
Dumbarton Bridge
Alameda County
San Mateo County
Tamarak
Nursery
Palomares
Sunol Rd
Stevenson
Stevenson Blvd
AutoMall Pkwy
Andrade Rd
Calaveras
Vallecitos Nuclear center
Vargas Rd
Rt 238/Mission
Washington Blvd
Durham Rd
Scott Creek Rd
Santa Clara County
Dixon Landing
F30
F20
880
84
238
680
262
Legend
LOS "A" or "B" Segments
LOS "C" Segments
LOS "D" Segments
LOS "E" Segments
LOS "F" Segments
F30 Average Speed <30 ≥ 20 mph
F20 Average Speed <20 ≥10 mph
F10 Average Speed <10 mph
This Segment was previously identified as LOS "F" in 1991 when the CMP was first adopted
0 0.250.5 1 Miles
Alameda County CMP
2010 LOS Monitoring Study
Figure
2010 PM Peaks
Level of Service Results
Planning Area 3
5


Contra Costa County
Alcosta
Hopyard
El Charro
Portola
1st St
S. Front Rd/Greenville
N. Flynn
Grant Line
Alameda County
San Joaquin County
580
F20
F10
F20
F30
Stoneridge Dr
Inman
North Mines
Bernal Ave
680
Sunol Blvd
Concannon
84
Ruby Hill /Kaithoff
Palomares
Sunol Rd
Vallecitos Nuclear center
Calaveras
Stevenson
Andrade Rd
F30
Vargas Rd
Rt 238/Mission
Washington Blvd
F30
0 0.3 0.6 1.2 Miles
Legend
LOS "A" or "B" Segments
LOS "C" Segments
LOS "D" Segments
LOS "E" Segments
LOS "F" Segments
F30 Average Speed <30 ≥ 20 mph
F20 Average Speed <20 ≥ 10 mph
F10 Average Speed <10 mph
Alameda County CMP
2010 LOS Monitoring Study
Figure
2010 PM Peaks
Level of Service Results
Planning Area 4
6


Central
Contra Costa County
Alameda County
Gilman
Sacramento
University
Dwight
Fish Ranch Road
Contra Costa County
Ashby
Adeline
Powell
F10
F20
F20
F30
Moraga
Alameda County
Bay Bridge
Lakeshore
Joaquin Miller/Lincoln
City & County of San Francisco
Main St
Coolidge
F30
Redwood
Jct SR 13
F30
Encinal
Park
73rd Ave
F30
98th St
Hegenberger
Legend
LOS "A" or "B" Segments
LOS "C" Segments
LOS "D" Segments
LOS "E" Segments
LOS "F" Segments
F30 Average Speed <30 ≥ 20 mph
F20 Average Speed <20 ≥ 10 mph
F10 Average Speed <10 mph
This Segment was previously identified as LOS "F" in 1991 when the CMP was first adopted
0 0.250.5 1 Miles
Alameda County CMP
2010 LOS Monitoring Study
Figure
2010 AM Peaks
Level of Service Results
Planning Area 1
7


880
98th St
MacArthur
580
Hegenberger
61
112
F30
185
I-580 Off-ramp
Grove Way
Marina Blvd
238
580
238
Hacienda
F20
A St
Mission/Jackson
880
F30
W. Winton
Sorenson
Clawiter
Toll Gate
Industrial
Alameda County
San Mateo County
San Mateo Bridge
92
238
F30
Alvarado-Niles Rd
880
F30
Alvarado Blvd
Legend
LOS "A" or "B" Segments
LOS "C" Segments
LOS "D" Segments
LOS "E" Segments
LOS "F" Segments
F30 Average Speed <30 ≥ 20 mph
F20 Average Speed <20 ≥ 10 mph
F10 Average Speed <10 mph
This Segment was previously identified as LOS "F" in 1991 when the CMP was first adopted
0 0.250.5 1 Miles
Alameda County CMP
2010 LOS Monitoring Study
Figure
2010 AM Peaks
Level of Service Results
Planning Area 2
8


F30
880
Alvarado-Niles Rd
F30
Alvarado Blvd
Tamarak
238
Nursery
Palomares
84
Sunol Rd
Vallecitos Nuclear center
Calaveras
680
Stevenson
Decota
F30
Newark Blvd
Mowry
F30
Rt 238/Mission
Dumbarton
Bridge
84
Alameda County
San Mateo County
Stevenson Blvd
AutoMall Pkwy
880
262
680
Scott Creek Rd
Santa Clara County
Dixon Landing
Legend
LOS "A" or "B" Segments
LOS "C" Segments
LOS "D" Segments
LOS "E" Segments
LOS "F" Segments
F30 Average Speed <30 ≥ 20 mph
F20 Average Speed <20 ≥10 mph
F10 Average Speed <10 mph
This Segment was previously identified as LOS "F" in 1991 when the CMP was first adopted
0 0.250.5 1 Miles
Alameda County CMP
2010 LOS Monitoring Study
Figure
2010 AM Peaks
Level of Service Results
Planning Area 3
9

Alameda County CMP 2010 LOS Monitoring Study	Figure
2010 AM Peaks Level of Service Results Planning Area 4	10

COMPARISONS TO PREVIOUS STUDIES

The 2010 P.M. peak period travel time and speed survey results were compared to the survey results from 1991 to 2008 on the major routes on the Alameda County CMP system. Table 7 shows these results for freeway corridors, while Table 8 lists the major arterial corridors. For each route, the segments have been aggregated to show the entire length of the route throughout Alameda County.

Freeways: Average speeds in two freeway corridors increased notably in 2008 compared to 2006, while three freeway corridors experienced significant drop in speed. The freeways that experienced a significant increase in speed are:

I-80 eastbound from Tollgate to Central: This 6.4- mile corridor operated at LOS F (20.9 mph) in 2008. The 2010 surveys showed average speeds increase of almost 8 miles to 28.5, an increase of 36 percent, although it is still operating at LOS F.

SR 24 westbound from Fish Ranch to I-580 (Off): This corridor is 4.5 miles long had a travel speed of 66.6 mph in 2010 with a level of service of A. Although speeds in 2010 shows an improvement of 8.2 mph over the 2008 speed (58.4 mph), the level of service remains at the same level.

Conversely, average speeds dropped in two corridors as noted below:

I-80 westbound from Central to Tollgate: Average speeds in this 6.1 mile corridor have degraded from 36.2 mph in 2008 to 27.2 mph in 2010, a drop in LOS from E to F.

SR 13 northbound and southbound directions between Mountain and Hillier: This 5.4 mile corridor experienced a drop in average speeds by approximately 10 mph in both directions in 2010 compared to 2008. The northbound direction degraded from 51 mph (LOS C) in 2008 to 41.3 mph (LOS D) in 2010. Similarly speeds on the southbound direction decreased from 49.0 mph (LOS C) in 2008 to 39.4 mph (LOS E) in 2010.

Other corridors either show modest increases or decreases in speeds.

Arterials: Average speeds remained mostly steady with few modest decreases on twenty-two (22) arterial routes along with notable increases on 2 arterial routes between 2008 and 2010.

The two notable increases in speeds occurred on 1) SR 123northbound from 35th Street to Carlson where average speeds increased from 13.9 mph (LOS E) in 2008 to 18.2 mph (LOS D) in 2010 and 2) Decoto Road/Dumbarton Bridge eastbound from the County line to SR 238 where speeds increased 4.5 mph from 25.9 mph (LOS C) in 2008 to 30.4 mph (LOS B) in 2010.

Table 7: Comparison of P. M. Peak Hour Travel Time Data & Speed on Selected Freeway Routes (1991-2010)

CMP Route	Dir	From	To	Length (miles)	1991	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
I-80	EB	Tollgate	Central	6.35	15:56 23.5	18:24 20.4	17:19 21.7	18:23 20.8	18:50 20.2	14:18 26.6	19:45 19.3	12:03 31.6	17:05 23.10	18:52 20.9	13:51 28.5
	WB	Central	Tollgate	6.11	14:27 25.3	15:26 23.7	15:41 23.3	14:53 24.6	13:07 28.0	20:52 17.6	16:33 22.2	13:10 27.8	12:38 27.7	9:38 36.2	12:51 27.2
I-580	EB	SR 238/ Foothill	I-205	30.33	32:55 56.3	33:40 55.0	33:.37 55.1	33:04 55.0	n/a n/a	49:25 40.5	59:43 30.5	53:22 34.1	45:46 36.8	47:41 34.5	51:57 30.8
	WB	I-205	SR 238/ Foothill	30.15	32:10 57.2	33:05 55.6	32:07 55.1	29:30 55.0	n/a n/a	33:09 55.0	33:10 54.5	30:02 60.2	30:35 58.6	29:03 61.4	27:13 65.6
I-580	EB	I-80/ I-580 Split	I-238	15.88	18:18 52.6	18:35 51.8	21:53 44.0	18:13 53.2	16:16 60.0	15:21 62.7	17:45 54.7	22:15 42.8	24:26 39.3	19:27 47.0	22:55 41.8
	WB	I-238	I-80	14.73	16:11 57.7	16:50 55.5	18:20 51.0	15:36 52.2	14:58 61.2	14:36 62.8	15:25 59.5	15:37 56.6	15:58 55.2	14:05 62.6	15:16 59.9
I-680	NB	Scott Creek	Alcosta (on)	21.13	21:59 58.1	22:59 56.7	22:31 56.7	24:16 52.2	25:07 50.5	21:54 58.2	24:39 51.4	30:21 41.8	23:48 52.9	29:14 43.4	31:39 40.1
	SB	Alcosta(on)	Scott Creek	21.30	21:45 59.0	22:05 58.1	23:23 54.9	21:04 60.6	19:06 66.8	20:13 63.2	20:44 61.6	19:27 65.7	21:51 58.5	20:10 63.4	19:24 65.9
I-880	NB	Dixon Landing	I-980	31.41	40:49 44.8	41:15 44.4	42:37 42.9	50:26 45.5	49:21 38.8	41:26 47.5	50:20 37.5	38:23 49.1	41:50 44.6	43:10 43.2	44:20 42.1
	SB	I-980	Dixon Landing	30.85	41:55 43.0	44:41 40.4	47:36 37.9	40:31 45.8	37:19 49.7	40:48 49.1	45:46 40.5	45:57 38.6	49:53 37.1	38:53 47.6	40:06 46.2
SR 13	NB	Mountain	Hiller	5.43	6:12 53.6	6:40 49.9	6:51 48.5	6:45 48.1	6:06 53.2	6:24 50.9	6:27 50.4	9:25 34.6	8:42 38.8	6:10 51:00	7:38 41.3
	SB	Hiller	Jct I-580	5.45	6:04 56.4	5:46 59.4	6:31 52.5	6:55 47.2	5:31 59.1	5:59 59.5	5:58 54.6	6:03 54.1	7:19 48.7	7:15 49.0	9:02 39.4
SR 24	EB	I-580 (on)	Fish Ranch	4.52	9:19 30.1	9:35 29.2	9:25 29.8	11:10 24.3	6:59 38.9	8:08 33.4	12:41 21.4	6:48 39.9	10:39 25.5	11:32 23.5	15:31 17.5
	WB	Fish Ranch	I-580 (Off)	4.47	5:00 54	4:58 58	5:01 54	5:24 50	4:30 60	4:41 57	4:26 60.5	4:34 58.7	5:03 58.8	5:05 58.4	4:11 66.6

Page 54

Table 8: Comparison of P.M. Peak Hour Travel Data & Speed on Selected Arterial Routes (1991-2010)

CMP Route	Direction	From	To	Length (Miles)	1991	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
Hesperian	NB	Tennyson	14th St.	5.50	19:35 17.2	19:19 17.5	18:40 18.1	16:06 20.5	17:18 19.5	18:10 17.3	22:00 15.3	22:10 14.9	24:55 13.4	25:09 13.4	22:4 14.8
	SB	14th St.	Tennyson	5.60	17.20 19.4	16:05 20.9	17:38 19.1	16:10 20.7	16:13 20.7	16:41 19.5	17:24 19.3	17:33 19.1	18:13 18.5	20:29 16.4	2:.4 16.0
SR 13 Ashby	EB	I-80	Hiller	3.77	15:17 14.7	13:19 16.9	13:40 16.5	13:40 16.5	14:26 15.6	16:57 13.4	15:04 15.0	16:47 13.5	15:44 14.4	14:08 16.0	17:52 16.0
	WB	Hiller	I-80	3.80	14:13 16.0	13:09 17.2	13:49 16.4	15:09 15.0	14:06 16.1	14.22 15.9	16:36 13.8	15:27 14.7	14:00 16.3	13:29 16.9	14:30 15.7
SR 61	SB	Atlantic	Davis	7.57	18:40 24.9	18:07 25.0	18:30 24.5	19:36 23.1	19:01 23.9	17:41 29.4	19:47 23.0	20:59 21.6	18:46 24.2	17:25 26.1	19:25 23.4
	NB	Davis	Atlantic	7.57	19:32 24.3	18:38 25.5	18:41 25.5	18:58 24.1	19:24 23.4	19:17 25.6	18:49 24.1	20:20 22.3	19:29 23.3	16:55 26.9	18:21 24.7
SR 84 Fremont	WB	SR-238	I-880 SB	4.30	10:07 25.0	8:27 30.5	10:56 23.5	10.27 24.1	11:42 22.0	10:23 24.9	11:33 22.3	9:48 26.3	9:49 26.29	9:51 26.2	10:33 23.10
	EB	I-880 SB	SR-238	4.30	11:21 24.3	10:24 24.8	11:45 21.9	11:38 18.7	12:56 19.9	14:31 16.6	11:58 21.5	10:43 24.1	11:29 22.47	11:15 22.9	12:17 20.1
SR 84 Livermore	WB	I-580 WB	Isabel	*5.23 (4.14)	9:20 32.4	10:36 28.5	9:27 32.0	11:03 27.4	11:01 27.5	10:20 10.2	10:45 23.1	5:30 38.5	7:43 40.71	7:25 38.2	7:51 39.9
	EB	Isabel	I-580 WB	*5.23 (4.14)	11:32 26.2	10:32 28.7	10:23 29.1	10:46 28.1	11:12 27.0	11:57 22.6	11:25 21.8	5:46 36.8	8:34 36.6	8:25 35.8	9:30 33.0

CMP Route	Direction	From	To	Length (Miles)	1991	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
SR 123	SB	Carlson	35th St.	5.45	16:26 19.0	16:32 19.7	14:22 22.7	18:09 18.0	18:15 17.9	18:48 17.4	17:22 18.8	17:38 18.5	22:38 14.45	19:53 16.5	17:37 18.6
	NB	35th St.	Carlson	5.46	16:56 20.1	15:32 21.1	18:12 18.0	17:42 18.5	26:00 12.6	18:36 17.6	22:39 14.4	19:56 16.4	22:53 14.31	23:36 13.9	17:59 18.2
SR 185	SB	42nd ST	SR 92/238	10.46	42:55 14.1	28:47 21.8	n/a n/a	30:31 20.6	29:12 21.5	32:11 19.3	30:56 20.3	33.25 18.8	34.23 18.25	34:22 18.0	34:41 18.1
	NB	SR 92/238	42nd St	10.31	38:34 18.6	28:54 21.7	n/a n/a	28:40 21.8	31:02 20.2	29:34 21.3	29:36 21.2	34:36 17.9	34:50 17.56	31:08 20.0	32:27 19.10
SR 238 Mission	NB	I-680 NB	Jackson	12.39	24:05 30.7	n/a n/a	27:30 26.9	27:10 27.3	27:04 27.4	26:37 29.2	30:05 24.6	30:30 24.4	27:55 25.5	27:55 26.6	27:45 26.8
	SB	Jackson	I-680 NB	12.36	24:28 30.3	n/a n/a	28:15 26.2	26:45 27.7	27:20 27.1	24:26 31.0	26:13 28.2	28:27 26.1	26:45 27.53	32:04 23.1	27:09 27.3
MLK/Shattuck Ave	NB	SR 24	University	2.78	7:02 17.2	6:43 18.3	6:07 20.1	12:01 13.7	11:41 14.3	11:16 14.8	11:54 14.0	11:47 14.2	11:50 13.8	12:05 13.8	10:02 16.6
	SB	University	SR 24	2.76	10:07 16.4	9:12 18.0	9:59 16.6	10.26 15.7	10:45 15.4	12:01 13.8	12:45 13.0	10:50 15.3	9:55 16.7	11:11 14.8	9:53 16.8
University Ave	EB	I-80 Off	Shattuck Pl	2.05	7:02 17.5	6:43 18.3	6:07 20.1	7:07 17.2	7.21 16.7	8:05 15.2	7:36 16.2	7:43 15.9	7:31 16.4	7:31 16.4	7:23 16.7
	WB	Shattuck Pl	I-80 Off	2.05	6:38 18.5	6:30 18.9	7:07 17.3	7.27 16.5	9:51 12.5	7:45 15.9	7:01 17.5	8:23 14.7	7:24 16.63	7:00 17.6	7:08 17.3
Decoto Rd/ Dumbarton Br	WB	Hwy 238	County Line	8.97	11:46 45.7	12:43 42.3	13:56 38.6	16:30 32.6	13:58 38.5	14:54 37.3	17:25 30.9	16:12 33.2	15:51 33.9	15:21 35.1	14:21 37.3
	EB	County Line	Hwy 238	8.36	12:41 42.3	14:01 28.3	14:40 36.6	17:49 30.0	17:06 31.4	15:50 34.9	14:35 36.8	17:01 29.5	16:32 29.2	19:23 25.9	16:30 30.4

CMP Route	Direction	From	To	Length (Miles)	1991	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010
SR 84 Niles Canyon	EB	SR 238	Isabel	*13.27 (15.35)	n/a n/a	n/a n/a	25.20 36.4	25:17 34.3	n/a n/a	29:20 31.4	38:08 24.2	37:02 24.4	30:1 3	27:1 29.4	29:20 27.8
	WB	Isabel	SR 238	*12:93 (15.01)	n/a n/a	n/a n/a	20.37 42.7	25.58 41.4	n/a n/a	19:56 45.9	22:41 39.7	24:42 40.8	21:5 5 35.4	16:28 40.9	17:49 44.67

Page 57

Segments with Notable Changes in the Last Two Years

Table 9 shows those roadways and segments for which the 2010 P.M. peak period surveys reported significant changes in the travel time results as compared to previous surveys. Routes are listed that have seen a change of two or more Level of Service grades between 2008 and 2010.

Overall there are more segments showing increases in speed compared to the number of segments showing a decrease in speeds between 2008 and 2010. Decreases in speeds appear to be mostly related to construction activities Improvements are likely due to the continued economic downturn.

Table 9 - Segments with Significant Changes from Previous Year - PM Peak Period			
CMP Route	**Segment**	**Change in Speed Data**	**Comments**
Segments with Decrease in Speed Resulting in Level of Service Change of 2 or More Grades			
I-80 WB	Central to Jct. I-580	Decrease from 56 to 48 mph	Bay Bridge construction
I-580 EB	Eden Canyon to San Ramon/Foothill	Decrease from 50 to 38 mph	Construction
I-580 EB	Coolridge to SH 13 Off	Decrease from 47 to 32 mph	
I-880 NB	SR 92 to A St	Decrease from 52 to 38 mph	Construction
I-880 SB	I-980 to 23rd	Decrease from 50 to 30 mph	Construction
I-980 EB	SR 24 @ 580	Decrease from 53 to 30 mph	
Hesperian - SB	Llewelling to Grant	Decrease from 19 to 14 mph	Construction
Park/23rd EB	Kennedy to E 11th	Decrease from 24 to 14 mph	Construction
University EB	San Pablo to Sacramento	Decrease from 18 to 12 mph	
SR 13 Ashby EB	Telegraph to College	Decrease from 13 to 7 mph	
SR 13 Ashby EB	College to Domingo	Decrease from 10 to 7 mph	
SR 61 NB	Cent/Web to Atlantic	Decrease from 30 to 16 mph	
Decoto EB	Union City CL to Alv-Niles Rd	Decrease from 20 to 14 mph	
SR 262 (Mission) WB	I-680 NB to I-880 SB	Decrease from 36 to 26 mph	
I-580/SR 24 Interchange	I-580 WB to SR-24 EB	Decrease from 38 to 25 mph	
I-580/SR 24 Interchange	SR-24 WB to I-580 EB	Decrease from 44 to 30 mph	
Segments with Increase in Speed Resulting in Level of Service Change of 2 or More Grades			
I-80 EB	Toll Plaza to I-580 SB Merge	Increase from 29 to 54 mph	
I-238 EB	I-880 to I-580	Increase from 42 to 62 mph	Completion of I-238 Widening project
I-238 WB	I-580 to I-880	Increase from 45 to 62 mph	
I-580 WB	Center to I-580/238	Increase from 55 to 60 mph	
I-680 WB	Scott Creek Rd to Rt 262/Mission	Increase from 40 to 58 mph	
I-880 NB	Dix Landing to SR 262/Mission	Increase from 34 to 52 mph	I-880/Mission interchange improvements completion
I-880 SB	AutoMall Pkwy to Rt 262/Mission	Increase from 44 to 62 mph	
I-880 NB	A st to I-238	Increase from 47 to 63 mph	Completion of I-238 Widening project
I-880 NB	Marina Blvd to SR 112/Davis	Increase from 50 to 62 mph	
SR-84 EB	Toll Plaza to Thorton	Increase from 38 to 59 mph	
SR-84 EB	Thorton Newark Blvd/Ardenwood Blvd	Increase from 26 to 66 mph	
Mowry EB	Farwell to SH 84	Increase from 17 to 25 mph	
Park/23rd EB	Encinal to Santa Clara	Increase from 12 to 22 mph	
Adeline NB	MLK Jr NB to MLK Jr SB	Increase from 14 to 19 mph	
Tenneyson EB	Hesperian to I-880	Increase from 14 to 22 mph	
SR 84 WB	Fremont City Limit to Union City Limit	Increase from 29 to 44 mph	
SR 123 San Pablo SB	Dwight to Ashby	Increase from 14 to 20 mph	
SR 123 San Pablo NB	Stanford to Ashby	Increase from 13 to 19 mph	
SR 123 San Pablo NB	Marin to Washington	Increase from 6 to 24 mph	
SR 238 (Mission) SB	Jackson to Sorenson	Increase from 13 to 23 mph	
I-580/I-680 Interchange	I-580 EB to I-680 NB	Increase from 20 to 25 mph	
I-580/I-680 Interchange	I-580 WB to I-680 SB	Increase from 19 to 31 mph	

5. TRAVEL TIME STUDIES OF ORIGIN-DESTINATION PAIRS

This section describes travel time surveys between selected origin and destination points for auto, transit, bicycle and HOV lane trips. The purpose of these studies is to evaluate the comparative performance of various transportation modes for the Annual Performance Report required by the CMP. These paired surveys, which were run simultaneously in the same corridor, provide insight into journey-to-work travel times between major employment centers and residential areas in Alameda County. Both auto and transit trips were surveyed for ten O-D pairs, eight during the P.M. peak period, and two during the A.M. peak period, including one where HOV lanes were used. In addition, bicycle travel times were recorded for one origin-destination pair between Emeryville and Berkeley.

Ten origin-destination (O-D) pairs have been selected by the CMA Board and by ACTAC to simulate typical commute trips on the County's major travel corridors. The first five pairs were surveyed in 1996, 1997, 1998, 2000 and 2002. Four additional O-D pairs were surveyed for the first time in 1998. An additional survey of HOV lane travel times was added for one of the O-D pairs (Fremont to San Jose) in 2000. These ten trip combinations, and the specific routes that were followed, are listed in Table 10.

In 2004, changes were made to four (4) O-D pairs (1, 3, 5, and 8) to accommodate changes in transit service in Newark, Livermore and Pleasanton. The new destinations were selected to be as close to the previous destination as possible, in a residential area, and approximately the same distance from the previous transit station or bus stop.

Table 10: Travel Routes for the Alameda County O-D Pairs - PM Peak Hour

#	Peak Period	Origin	Destination	Transit/Bus Route	Highway Travel
1	P.M.	**Hayward** Kaiser Med. Ctr, 27400 Hesperian.	**Newark** 1996-2002: Residence near Lafayette St at Newark Blvd. 2004-2010: Residence near Thornton Ave. and Ruschin Drive.	1996-2002: Walk to Hesperian, AC 97 to AC 29, at Union City BART Stn., to Newark/Lafayette, walk to door. 2004-06: Walk to Hesperian, AC 97 to AC 232, at Union City BART Stn., to Cedar/Thornton, walk to door. 2008-2010: Walk to Hesperian, AC 97 to AC Transbay SB Line/SB Newark at Union City Blvd./Whipple Rd to Newark Blvd/Mayhews Landing Rd, walk to door	1996-2002: Walk to parking; Hesperian to Union City Blvd., to Newark Blvd., to Lafayette St.; park and walk to door. 2004-2010: Walk to parking; Hesperian to Tennyson to I-880; exit Thornton to Ruschin; park and walk to door.
2	P.M.	**Emeryville** Chiron Office Bldg., 4560 Horton St., near 53rd & Hollis Sts.	**Berkeley** Residence near Marin Circle at Los Angeles Ave.	1996-2006: Walk to 53rd and San Pablo, AC 72 or 73 to AC 43 at Solano Way, exit at Marin Circle, walk to door. 2008: Walk to Shellmound St.and Ohlone Wy, AC 57 to AC 18 at 40th St/MacArthur BART to Sutter St./Hopkins St. walk to door. 2010: Walk to 53rd and San Pablo, AC 72 or 73 to AC H at Gilman St., exit at Marin Circle, walk to door.	1996 – 2010: Walk to parking; 53rd St. to San Pablo Avenue, to Hopkins Street, to Marin Circle; park and walk to door.
3	P.M.	**Hayward** Cal State University at Carlos Bee Ave.	**Livermore** 1996 – 2002: Residence near Portola and North Livermore Avenue. 2004-2008: Residence near Delaware Way and North Murrieta.	1996-2002: Walk to AC 92, to Hayward BART, BART to Dub/Pleas Station, Wheels 12 to Portola & N. Murietta, walk to Portola and North Livermore Ave; walk to door. 2004-2008: Walk to AC 92, to Hayward BART, BART to Dub/Pleas Station, Wheels 12 or 12X (12 X modified to 12 V in 2008) to N. Murietta and Portola (Del Norte in 2008) ; walk to door. 2010: Unqualified route.	1996-2002: Walk to parking; Carlos Bee, to Mission Blvd, to "A"/Redwood, to I-580, to Portola exit, to N Livermore Ave.; park & walk to door. 2004-2010: Walk to parking; Carlos Bee, to Mission Blvd, to Grove Way, to I-580 EB, to Portola exit, to Hurton to Delaware Way; park and walk to door.
4	P.M.	**Oakland** Downtown Oakland 1333 Broadway building	**San Leandro** Residence near Farnsworth St. and Chapel Ave.	1996 -2008: Walk to BART 12th St. Station; BART to San Leandro Station, to AC 84 to Farnsworth/Manor Blvd.walk to door. 2010: Walk to BART 12th St. Station; BART to Bayfair BART Station, to AC 89 to Farnsworth/Manor Blvd.walk to door.	2008: Walk to parking; local streets to I-880, to Marina Blvd, to Chapel Avenue; park and walk to door.

Table 10 (continued): Travel Routes for the Alameda County O-D Pairs - PM Peak Hour

#	Peak Period	Origin	Destination	Transit/Bus Route	Highway Travel
5	P.M.	**Fremont** NUMMI Plant 45500 Fremont Blvd.	**Pleasanton** 1996 – 2002: Residence near Valley Ave. and Greenwood Rd. 2004-2008: Residence near Hansen/Valley Ave.	1996 – 2002: Walk to AC 22 to Fremont BART, BART to Dubl/Pleas Station, Wheels 10 to Greenwood Road and Valley Avenue, walk to door. 2004-2008: Walk to AC 212 or 218 to Fremont BART, BART to Dubl/Pleas Station, Wheels 7 or 8 to Valley Avenue, walk to door. 2010: Walk to AC 212 or 218 to Fremont BART, BART to Dublin/Pleasaton Station, walk to, WHEELS 8B to Hansen and Valley.	1996 –2002: From parking to Fremont Blvd to Durham Road to I-680 to Sunol Blvd to Greenwood Rd.; park and walk to door. 2004-2010: : From parking to Fremont Blvd to Durham Road to I-680 to Bernal Ave. exit; to Valley Ave. to Hansen; park and walk to door.
6	A.M.	**Fremont** Residence near Thorton Ave. at Fremont Blvd.	**San Jose** Fujitsu, 3801 Zanker Road at Tasman	1998-2002: Walk to AC 27, transfer to SCVTA 140 at Fremont BART, walk to door. 2004-2006: Walk to AC 218; transfer to SCVTA 180 at Fremont BART; transfer to SCVTA 33; exit at Zanker; walk to door. 2008: Walk to ACE Fremont Station, ACE WB line #03 to Great America Station, walk to Tasman/Lickmill to VTA #330;exit at Zanker 2010: Walk to AC 216 to Fremont BART station, VTA 140 to Tasman, walk to Zanker Road.	From residential driveway to Thornton, to I-880, to SR 237, to Zanker; park and walk to door.
7	A.M.	**Fremont** Residence near Thorton Ave. at Fremont Blvd.	**San Jose** Fujitsu, 3801 Zanker Road at Tasman		HOV: From residential driveway to Thornton, to I-880 HOV lanes, to SR 237, to Zanker; park and walk to door.
8	P.M.	**Oakland** Federal Building., Jefferson at 14th	**Pleasanton** 1998-2002: Residence near Hopyard Rd. and Valley Ave. 2004-06: Residence near Valley Ave. at Hansen Dr.	1998-2002: Walk to BART 12th St., BART to Dublin/Pleasanton Station., Wheels 8, walk to door. 2004-2006: Walk to BART 12th St., BART to Dublin/Pleasanton Station., Wheels 7 or 8 (in 2008 Wheels 8 or 54 to Fairgrounds ACE to Wheels 53) to Valley near Hansen, walk to door. 2010: Walk to BART 12th St., BART to Richmond/Fremont, transfer at Bayfair for BART to Dublin/Pleasanton Station., Wheels 8A or 54 to Valley near Hansen, walk to door.	Walk to parking; local streets to I-880 to I-238 to I-580, to Hopyard to Valley; park and walk to door. 2010: local streets to I-980 E to CA-24 exit I-580 E to Hayward, Hopyard exit right onto Hopyard, right onyto Valley Ave. right onto Hansen Drive.

Page 61

Table 10 (continued): Travel Routes for the Alameda County O-D Pairs - PM Peak Hour

#	Peak Period	Origin	Destination	Transit/Bus Route	Highway Travel
9	P.M	**Fremont** Washington Hospital at Mowry Avenue.	**Alameda** Bay Farm Island, Residence near Searidge at Robert Davey.	1998 – 2002: Walk to Fremont BART, BART to Coliseum, AC 49 to Alameda, walk to door. 2004-2008: Walk to Fremont BART; BART to Fruitvale; AC 50 to Alameda; exit at Robery Davey Jr. Dr.; walk to door. 2010: Walk to Fremont BART; BART to Fruitvale; AC 0 to Alameda take AC OX; exit at Robery Davey Jr. Dr.; walk to door.	1998-2002: Walk to parking; Mowry to I-880 to Hegenberger, to Doolittle, to Island; park and walk to door. 2004-2010: Walk to parking; Mowry to I-880 to 98th Ave., to Doolittle, to Island Dr. and walk to door.
10	P.M.	**Alameda** Naval Air Station, Atlantic at Main.	**Oakland** Business near College Ave. at Lawton.	1998-2002: AC 10 to BART 12th St., BART to Rockridge, walk to door. 2004-2008: AC 63 to BART 12th Street; BART to Rockridge; walk to door. 2010: AC 31 to Atlantic to AC 51 College Ave. walk to door.	Walk to parking; Atlantic to Webster, to I-880, to I-980, to SR 24, Claremont exit to Clifton, to Lawton, to College, park and walk to door. 2010: Main St. to Appezzato Pkwy, onto CA-260 N/CA-61 N/Webster St, Posey Tube, onto Broadway to Telegraph, left onto College Ave.

Note – Regarding Pair 3 transit travel, transit route taken was found to be an indirect or roundabout commuter path, therefore the data was disqualified. For Pair 10 auto travel, the driver chose the local street route as opposed to the freeway route that was used in previous surveys. This will be corrected in future surveys. For Pair 5 transit travel, different transit routes were taken as a shorter route was found after completion of the first run. Therefore, for the 2012 O-D data collection, the shorter route will be used.

SURVEY METHODOLOGY

Except for the O-D surveys on the bridges where toll tags data was used instead, two surveyors, one driving an auto and one taking transit (or a bicycle in one case), traversed between the designated origin and destination points, documenting their travel times and identifying any anomalies that they encountered during the course of their trip (i.e., a traffic accident). Transit trips were taken either on buses (AC Transit, UC Transit, VTA, Wheels), rail (BART or ACE), or a combination of these modes. The bicycle trip was taken on local streets in Emeryville and Berkeley. Whenever possible, the auto and transit trip started on the same day at the same time. Surveys were conducted on mid-week days (Tuesday through Thursday) during the period between April 13 and May 13, 2010 Most routes were surveyed on two different days. The data for O-D Pairs 1-5 and 8-10 were collected during the P.M. peak period (4:00 to 6:00 P.M.), while O-D Pairs 6 and 7 were surveyed between 7:00 and 9:00 A.M.

Travel time data were recorded for each trip. Table 11 lists the time components that were noted for each type of trip.

For the analysis of transit trip data, no more than half of a route's scheduled headway was used for the initial waiting time. The actual waiting time was used for all other transit transfers.

The Emeryville-Berkeley O-D Pair 2 was also surveyed by bicycle. These data have been collected between 4:00 and 6:00 P.M., on days with good weather, and no incidents or accidents affecting traffic flow. In the 2010 surveys, construction along the bike route caused detours and hence made the travel time not directly comparable. The times do not include parking the bicycle, walking to the final destination, or changing clothes at the work site.

Table 11
Time Components of Origin-Destination Surveys

Auto Trip	Transit Trip
• Start time at origin door (walk) • Auto departs parking • Merge onto 1st freeway • Merge onto 2nd freeway • Exit from freeway • Arrive at parking • Arrive at destination door (walk)	• Stat time at origin door (walk) • Arrive at first transit stop • Board 1st bus/rail • Exit 1st bus/rail • Board 2nd bus/rail • Exit 2nd bus/rail • Board 3rd bus/rail • Exit 3rdbus/rail • Arrive at destination door (walk)

ORIGIN-DESTINATION SURVEY RESULTS

For the 10 pairs measured, travel times by both auto and transit increased on two pairs: Fremont-Pleasanton and Alameda-Oakland. As before, the worst transit commute was between Fremont and Pleasanton (154 minutes). For the O-D pairs studied, transit travel times range between 2-4 times longer than auto travel, which is slightly improved over 2008 results where transit travel times ranged between 2-5 times longer than travel by auto.

Table 12 lists the results of the 2010 origin-destination (O-D) surveys for 10 pairs for auto and 9 for transit, and also includes a comparison with the previous surveys. Of the ten O-D pairs, Auto travel time either increased or remained the same with the exception of travel between Hayward and Livermore, where the travel time decreased by 6%. The largest increase was between Fremont and Pleasanton where the auto travel time increased by 42 percent or 11 minutes.

Of the nine O-D pairs surveyed for transit, transit travel times improved on 6 pairs and worsened on 2 (as described earlier, one transit travel has unqualified data and is not being reported for this cycle). The largest transit travel time improvement was between Oakland and Pleasanton where the travel time dropped by 31% (107 minutes to 74 minutes). This could be due to a direct Wheels bus connection available at the BART station this year as opposed to having to transfer twice to get to the destination in previous cycles. In early Spring 2010, AC Transit had implemented systemwide changes to their bus schedules. The effect, if any, of these changes on travel times is not yet known.

Travel times for auto and transit for each pair are described in more detail below:

Auto Times

Overall, the 2010 auto travel times for the O-D pairs slightly worsened or stayed at the same level compared with the surveys from previous years, likely due to the construction activity occurring across the county. The only pair that showed improvement was Pair 3 Hayward-Livermore, where the auto travel time improved by 3 minutes (6%) from 2008.

The auto travel time on O-D Pair 4 (Oakland-San Leandro) and Pair 7 (Fremont –San Jose by HOV) were the same as in 2008. The largest percentage of time increase was between Fremont and Pleasanton (O-D Pair # 5) where the auto travel time increased by 42% or 11 minutes. Regarding O-D Pairs 1 (Hayward – Newark) , 2 (Emeryville-Berkeley), 6 (Fremont- San José) and 10 (Alameda – Oakland) auto travel time increase was marginal, between 1 to 2 minutes

For Pair 10, for auto travel, the driver chose a local street route as opposed to the freeway route that was used until 2008. This will be corrected in future surveys to ensure consistency and to have the ability to measure the trend.

Travel time between Fremont and San Jose (O-D pairs # 6 and 7) by HOV lane and single occupant vehicle remained almost the same as in 2008. Travel by HOV lane compared to the single occupant vehicle shows a time saving of 5 minutes.

Transit Times

The average 2010 transit travel times generally improved compared to previous years. As shown in Table 10, the transit routes for seven O-D pairs with the exception of pair 1 and 3 were changed due to either cancellation of the service or the availability of a faster alternate route.

Observations about each O-D pair are listed below.

O-D Pair 1. The transit travel time on this route was reported to be 57 minutes in the 2010 surveys, compared to 74 minutes in 2008. Auto travel time was 15 minutes, nearly 4 times shorter than transit.

O-D Pair 2. The average transit travel time was 59 minutes, 11 minutes shorter than in 2008. Auto travel time was 24 minutes, 2 minutes longer than in 2008. The bicycle average travel time was 47 minutes, which is 15 minutes longer than last year due to construction related detours.

O-D Pair 3. The transit route taken for this O-D pair was found to be a longer and more roundabout route than would be considered for a typical commute route, therefore the data has been disqualified, and it will be reported in future monitoring reports using the more direct transit routes. Auto travel time was 51 minutes, 3 minutes shorter than transit in 2008.

O-D Pair 4. The average transit travel time was 67 minutes, 11 minutes shorter than the 2008 surveys. Auto travel time was 27 minutes, the same as in 2008. Transit travel time was about a 2.5 times longer than the auto travel.

O-D Pair 5. The transit travel time on this route was reported to be 154 minutes in the 2010 surveys, which is a 9 minutes increase from 2008. Auto travel time was 37 minutes, about five and half times shorter than transit.

O-D Pair 6. In the 2010 surveys, average transit time was 73 minutes compared to 82 minutes in 2008, a 9 percent decrease. This is likely due to change in transit route because the alternate route as shown in Table 10 provided shorter travel time compared to 2008. The 2008 auto average time was 28 minutes, about three times faster than transit.

O-D Pair 7. The auto travel time for this route was 23 minutes, which is the same amount of travel time in the HOV lane in 2008. The HOV lane is about 20 percent faster than the mixed-flow lanes or 5 minutes.

O-D Pair 8. The transit travel time on this route was reported to be 74 minutes, a decrease of 33 minutes from 2008. This decrease in transit travel time is caused by change in transit line schedules and resulted in an additional transfer. Auto travel time was 52 minutes.

O-D Pair 9. The average transit travel time was 91 minutes, 3 minutes less than the 2008 surveys. Auto travel time was 48 minutes, a 12 percent increase compared to 2008. Auto travel time was more than over 50 percent faster than transit.

O-D Pair 10. The average transit travel time was 52 minutes, an increase of 2% from the 2008 surveys. Auto travel time was 24 minutes, comparable to the 2008 surveys. Auto travel time was less than half that of transit.

Bicycle Times

As in previous surveys, O-D Pair 2, between Emeryville and Berkeley, includes travel by bicycle as well. Compared to previous years where the bicycle travel time range was 30-33 minutes, 2010 bike travel time was significantly high, 47 minutes, due to construction activities occurring along the bike route and related detours. Therefore, travel time by bicycle in 2010 is not comparable with previous years although it was still 12 minutes shorter than the transit travel time for this O-D pair. Generally, bicycle commute trips may involve some additional time to deal with bicycle storage and changing clothes, which can add to total commute time.

Comparison of Travel Modes

Overall, both auto and transit travel times have improved compared to 2008. In the 2010 surveys, transit travel times ranges between 2-4 times longer than auto travel, slightly improved over 2008 results where transit travel times ranged between 2-5 times longer than travel by auto. Consistently, Fremont-Pleasanton has the highest transit travel times, which is about 4 times longer than auto. It takes nearly two and half hours, to reach Pleasanton from Fremont by transit while it takes 37 minutes by auto. Travel times for Alameda-Oakland O-D pair continued to measure about double of auto. Most of the transit delay for these pairs is associated with transfers between lines. This is particularly an issue when the passenger must transfer to a bus line that does not operate at frequent intervals. Actual commuters who regularly use transit are more likely to time their trips to match known bus transfer schedules, and could have lower average travel times than these surveys indicate.

Table 12: Origin-Destination Pair Travel Times

O-D Pair	Origin	Destination	Mode	Driving Distance	1998 Avg. (min)	2000 Avg. (min)	2002 Avg. (min)	2004 Avg. (min)	2006 Avg. (min)	2008 Avg. (min)	2010 Avg. (min)	2010 No. of Runs	2010 Range of Times	2010 Percent Variation from '08
1*	Hayward	Newark	Auto	11.2 mi	24	22	22	16	19	14	15	4	12-19	7
PM			Transit		88	92	79	90	86	74	57	2	55-58	-23
2	Emeryville	Berkeley	Auto	4.8 mi	25	26	25	28	22	22	24	4	19-34	9
PM			Transit		61	n/a	56	53	45	70	59	2	52-65	-16
			Bike		33	30	30	33	30	32	47	2	42-52	47
3*	Hayward	Livermore	Auto	34.5 mi	53	45	49	61	61	54	51	4	45-56	-6
PM			Transit		144	152	141	120	113	143	187	unqualified data		
4	Oakland	San Leandro	Auto	10.8 mi	35	29	32	41	34	27	27	4	24-29	0
PM			Transit		74	64	56	70	66	78	67	2	56-78	-14
5*	Fremont	Pleasanton	Auto	18.0 mi	31	34	33	27	39	26	37	4	28-50	42
PM			Transit		130	122	125	146	181	145	154	2	133-174	6
6	Fremont	San Jose	Auto	14.8 mi	39	55	49	30	33	27	28	4	25-30	4
AM			Transit		129	104	118	94	111	82	73	2	70-76	-10
7 AM	Fremont	San Jose	Auto	14.8 mi	---	35	34	27	25	23	23	4	20-28	0
8*	Oakland	Pleasanton	Auto	26.6 mi	58	60	62	45	57	41	52	4	41-69	27
PM			Transit		81	96	91	77	75	107	74	2	71-76	-31
9	Fremont	Alameda	Auto	25.2 mi	50	57	53	64	52	43	48	4	42-58	12
PM			Transit		86	74	70	123	102	94	91	2	90-91	-3
10	Alameda	Oakland	Auto	6.8 mi	21	17	21	22	21	22	24	4	22-27	9
PM			Transit		51	47	45	45	43	51	52	2	50-54	2

* Destination for these four O-D pairs changed since 2004

TRAVEL TIMES ON BAY BRIDGE CROSSINGS

Travel time on the three Bay Bridges that connect Alameda County to San Francisco and San Mateo Counties were reported in the LOS Monitoring Reports in 2002 and 2004 using auto travel time data collected annually by Caltrans on all the bridges for the morning and evening commute periods. The data represented travel time between origin and destination in the segments between I-880 or I-80 in Alameda County across the bridges to SR 101 in San Francisco and San Mateo Counties. In addition, in 2004, an analysis of traffic volumes on the three bridges were done to see how the weekday vs. weekend traffic compares on the three bridges.

However, similar and comparable data was not available after 2004 because Caltrans stopped collecting travel time data on Bay Area Freeways and MTC took over the monitoring responsibility. MTC's annual Highway Congestion Monitoring program focuses only on congested freeway segments. As a result, only data for the Bay Bridge is collected by MTC. This data is not comparable to previous years because the segments termini are different.

As part of the 2009 CMP Update, the CMA Board reviewed the issue of lack of data availability for three bridges, as these Bay Bridge crossings are important county to county regional links, and travel time data on these bridges provide a measure to see how these connections are performing over time. It was expressed that inclusion of this data to the LOS Monitoring report provides useful information for identifying where transportation investments should be made.

Since this data is not used in the annual Conformity process, the Board approved collecting travel time data on the three Bay Bridge Crossings connecting Alameda County to San Francisco and the Peninsula by using the Freeway Performance Monitoring System (PeMS) data or other data such as Toll Tags first, and if this data is insufficient or not reliable, then as a one time measure perform floating car runs for comparison with PeMS or other data. Based on this direction from the Board, Toll Tags data from MTC's 511.org for March 2009 has been included in the 2010 LOS Monitoring Report in Table 13. The data presented are for the weekday peak periods, consistent with the data from prior years.

The 2009 Bay Bridge Crossings travel time data presented in Table 13 shows significantly shorter travel time across the bridges compared to the previous two years. In this regard, the following points are to be kept in mind when using the toll tags data reported for 2009 as these make the data not directly comparable with the previous years:

- *Shorter travel time* - since autos with toll tags do not slow down at the toll plazas they will tend to show shorter travel time than the ones that go through cash only lanes.
- *Different Segment Termini:* Origin and Destination points for many of the Bridges are different because of the different sources of data.
- *Different Economy:* Economy in 2009 is a down economy compared to booming or stable economy in 2001 and 2003, which will reflect in the commute travel time.

It is anticipated that when similar travel time data from the toll tags is reported in 2012 LOS Monitoring report, a reliable comparison can be made and the trend in travel time can be determined.

Table 13

Travel Times on Bay Bridge Crossings

Bridge	Time Period	From - To		2001		2003		2009	Percent Difference between 2003 -2009
				Segment Travel Time	Total Travel Time	Segment Travel Time	Total Travel Time	Total Travel Time	
Dumbarton Bridge (SR 84)	**Westbound (toward San Mateo County)**								
	A.M.	2009:I-880 - SR 84 @ University Ave	2001-03: I-880 -CL	25		7			
	A.M.		2001-03: CL-US 101	7	32	7	14	9.7	-31%
	P.M.		2001-03: I-880 -CL	6		6			
	P.M.		2001-03: CL-US 101	6	12	5	11	8.8	-20%
	Eastbound (toward Alameda County)								
	A.M.	2009:SR 84 @ University Ave - I-880	2001-03: US 101-CL	6		5			
	A.M.		2001-03: CL -I-880	6	12	6	11	10.8	-2%
	P.M.		2001-03: US 101-CL	17		14			
	P.M.		2001-03: CL -I-880	9	26	9.5	23.5	11.1	-53%
San Mateo Bridge (SR 92)	**Westbound**								
	A.M.	2009: I-880 - SR 92 @ Foster City Blvd	2001-03: I-880 -CL	20		8			
	A.M.		2001-03: CL-US 101	7	27	7	15.5	12.3	-21%
	P.M.		2001-03: I-880 -CL	8		7			
	P.M.		2001-03: CL-US 101	7	15	7.5	14.5	10.9	-25%
	Eastbound								
	A.M.	2009: SR 92 @ Foster City Blvd- I -880	2001-03: US 101-CL	7		7			
	A.M.		2001-03: CL -I-880	6	13	7	14	10.5	-25%
	P.M.		2001-03: US 101-CL	20		7			
	P.M.		2001-03: CL -I-880	19**	39**	17	24	9.5	-60%
Bay Bridge (I-80)	**Westbound**								
	A.M.	2001-03: I-580 merge - 5th St Off-ramp 2009: I -880 @ 7th St to I- 80 @ Fremont St		--	31	--	26	11.7	-55%
	P.M.			--	17	--	23.5	13.4	-43%
	Eastbound								
	A.M.	2001-03: Sterling St on-ramp- I-580 Off-ramp 2009: I-80 @ 4th St to I-880 @ Grand Ave		--	8	--	8	7.5	-6%
	P.M.			--	14	--	17.5	12	-31%

Note - CL indicates County Line

6. BICYCLE COUNT DATA

Since 2002, the ACCMA collected bicycle counts in 12 locations across the county with the help of the respective local jurisdictions. The intent has been to collect this data every two years in order to measure the trends in bicycle usage and to provide supporting data for the biennial LOS Monitoring Report, the Countywide Bicycle Plan, and the Regional Bicycle Plan.

Beginning with the 2010 LOS Monitoring cycle, the collection of bicycle counts is being coordinated with Alameda CTC/ACTIA, who is pursuing an annual bicycle count data collection program starting in Fall 2010 for approximately 30 locations across the County. The 12 locations where the LOS Monitoring Studies had been reporting bicycle counts are anticipated to be included in the program's count locations. In order to monitor trends in bicycling, future LOS Monitoring reports will include bike counts beginning in Fall instead of Spring for all the 30 locations including the 12 locations monitored in previous monitoring reports.

Details of bicycle counts collection until 2008

The number of bicyclists was counted at twelve major intersections throughout the County on one day between March and June of the monitoring year when schools were in session. Counts were collected at the same locations. The time period selected for counting was from 3:00 P.M. to 6:00 P.M. in order to capture a portion of school trips. The data was collected in each jurisdiction on a Tuesday, Wednesday, or Thursday. Table 14 shows the count locations and total number of bicycles counted up to 2008. Data for 2010 will be reported in the 2012 LOS Monitoring Report.

Table 14: Alameda County Bicycle Count Data

	Jurisdiction	Location	Time Period (p.m.)	Bicycle Counts 2002	2004	2006	2008	% Diff 06-08
1	Alameda	Atlantic Avenue and Webster Street	3-6	36	56	60	76	27%
2	Berkeley	Milvia Street and Hearst Avenue	3-6	405	392	356	438	23%
3	Emeryville	San Pablo Avenue and 40th Street	3-6	142	168	173	196	13%
4	Fremont	Paseo Padre Parkway and Mowry Avenue	3-6	60	52	22	16	-27%
5	Hayward*	Mission Blvd and Jefferson Street	3-6 2006-4-6	11	23	39	25	-57%
6	Livermore	East Street and Vasco Road	3-6	86	109	106	93	-12%
7	Newark	Thornton Avenue and Willow Street	2002 - 3-5 3-6	5	12	11	13	18%
8	Oakland	Telegraph Avenue and 27th St	3-6	136	79	144	222	54%
9	Piedmont	Grand Avenue and Oakland Avenue	3-6	30	21	41	46	12%
10	Pleasanton	Hopyard Road and Stoneridge Drive	3-6	32	19	5	32	540%
11	Alameda County	Hesperian and Lewelling Blvd	3-6 2004 - 4-6	27	25	36	68	89%
12	Alameda County	Redwood Road and Grove Way	3-6	26	--	--		
12	Alameda *County	Redwood Road and Castro Valley Blvd.	4-6 2008 – 3-6	--	26	36	45	-17%

* indicates percentage difference calculated for 2 hours.

7. MONITORING PROGRAM RESULTS

This section summarizes observations about traffic conditions on Alameda County freeways and CMP designated arterials, particularly during the afternoon peak period, which is required by the CMP legislation. Overall, speeds on freeways and arterials have slightly improved, likely due to the continued economic downturn.

LOS F Segments

Of the 36 LOS F segments described in Table 4 of the document, 11 are exempt from deficiency plan requirements because they were grandfathered in the 1991 LOS surveys. Of the remaining 25 segments, 8 are functioning at LOS F for the first time and 17 have been found at a level of service of F in previous surveys. The status of any planned improvements for these segments is summarized below.

- LOS F conditions on I-80 segments in the vicinity of the Bay Bridge are probably due to construction on the Bay Bridge.

- The LOS F conditions on I-580 eastbound in the East County could be due to the HOV/HOT lane and I-580/Isabel Interchange construction.

- There are many projects that are under construction on are near I-880 including the I-880/5th Avenue Retrofit Project and I-880/High Street Retrofit Project in the North County, and SR 92/I-880 Interchange improvements in the Central County. It is expected that the performance of the freeway will be improved once construction is completed.

- SR 84 eastbound from Pleasanton-Sunol Road to Vallecitos Nuclear Center entrance could be improved by projects identified in the SR 84 corridor including Tri-Valley Triangle Study. The proposed improvements include Caltrans SHOPP projects, which are safety related, and the addition of truck climbing lanes on Pigeon Pass.

- Performance of SR 24 is expected to be improved with the completion of Caldecott Tunnel 4th Bore Project that commenced construction recently.

Observation in General LOS Trends

Based on the 2010 monitoring results, generally speeds on freeways and arterials appear to have improved since the 2008 surveys, likely due to the continued economic downturn. However, construction activities occurring across the county created pockets of congestion.

APPENDIX A

The following Appendix contains the specific results for each of the CMP segments in Alameda County. The data is arranged as follows:

- P.M. Freeway Segments, Pages A-1 to A-4
- P.M. Arterial Segments, Pages A-5 to A-10
- P.M. Ramps and Special Segments, Page A-11
- A.M. Freeway Segments, Pages A-12 to A-15
- A.M. Arterial Segments, Pages A-16 to A-21
- A.M. Ramps and Special Segments, Page A-22

The complete field data study results, which show the results of each individual travel time run and other study results, are contained in a CD titled '*Technical Compendium of Travel Time Studies – 2010*, which is on file at the ACCMA.

2010 LOS Monotoring Study Results for Freeways - PM Peak Period

		Segment Limits			Plan	Length	No of	Prior LOS "F"	2008 LOS Results		2010 LOS results	
	CMP Route	From	To	Jurisdiction	Area	(miles)	Lanes	(Years)	Speed	LOS	Speed	LOS
1	I-80 - EB	SF County Line	Toll Plaza	Oak	1	2.06	10	06	54.2	C	53.4	C
2	I-80 - EB	Toll Plaza	I-580 SB Merge	Oak	1	1.15	10	93-02,06, 08	28.6	**(F30)**	54.2	C
3	I-80 - EB	I-80/I-580 (Merge)	Powell	Emery - Berk	1	0.79	10	91-95, 97-08	11.07	**(F20)**	16.58	**(F20)**
4	I-80 - EB	Powell	Ashby	Emery - Berk	1	0.67	10	91-95, 97-08	10.42	**(F20)**	11.68	**(F20)**
5	I-80 - EB	Ashby	University	Emery - Berk	1	1.34	10	91-95, 97-08	25.48	**(F20)**	31.74	E
6	I-80 - EB	University	Jct I-580 (off)	Berk - Alb	1	1.51	10	91-92, 96-97,02,06	34.2	E	44.8	D
7	I-80 - EB	Jct I-580 (off)	Central (on)	Berk - Alb	1	1.12	10	91-92, 96-97,02,06-08	26.7	**(F30)**	39.1	E
8	I-80 - WB	Central	Jct I-580	Berk - Alb	1	0.70	10		56.4	B	46.7	D
9	I-80 - WB	Jct I-580	University	Berk - Alb	1	1.49	10		56.0	B	23.7	**(F30)**
10	I-80 - WB	University	Ashby	Emery - Berk	1	1.36	10	91-92, 94-'06	31.2	E	24.7	**(F30)**
11	I-80 - WB	Ashby	Powell	Emery - Berk	1	0.64	10	91-92, 94-08	18.6	**(F20)**	16.6	**(F20)**
12	I-80 - WB	Powell	I-80/I-580 (Split)	Emery - Berk	1	0.42	10	91-92, 94-'06	31.5	E	31.7	E
13	I-80 - WB	I-580 Split	Toll Plaza	Oak	1	1.20	10	91-'93. '97-'00,04,06	40.4	E	41.7	D
14	I-80 - WB	Toll Plaza	SF County	Oak	1	2.00	10		32.0	E	41.5	D
15	I-238 - EB	I-880	I-580	Uninc-San L	2	2.28	6	91-92,94,96-97,02,06	41.7	D	62.3	A
16	I-238 - WB	I-580	I-880	Uninc-San L	2	1.60	6	97-'08	24.8	**(F30)**	61.8	A
17	I-580 - EB	I-238/Fthl Off	Grove	Unincorp	2	2.88	8		52.1	C	56.4	B
18	I-580 EB	Grove	Eden Canyon	Uninc - Pleas	4	2.17	8		56.5	B	72.9	A
19	I-580 EB	Eden Canyon	San Ramon/ Foothill	Uninc - Pleas	4	4.80	8		50.3	C	38.3	E
20	I-580 EB	San Ramon/ Footh	I-680	Uninc - Pleas	4	0.77	8	08	17.7	**(F20)**	13.6	**(F20)**
21	I-580 EB	I-680	Hopyard	Plea	4	0.76	8	98-'02,06-08	9.1	**(F10)**	8.7	**(F10)**
22	I-580 EB	Hopyard	Santa Rita	Plea	4	1.96	8	98-'02,06-08	12.7	**(F20)**	10.8	**(F20)**
23	I-580 EB	Santa Rita	El Charro	Uninc-Pleas	4	1.24	8	02, 08	29.0	**(F30)**	22.3	**(F30)**
24	I-580 EB	El Charro	SR 84/Airway Blvd.	Liv	4	1.52	8	02	50.5	C	41.1	D
25	I-580 EB	SR 84/Airway Blvd	Portola	Liv	4	1.71	8	02	59.5	B	53.5	C
26	I-580 - EB	Portola	1st St	Liv	4	2.70	8	02	55.9	B	66.3	A
27	I-580 - EB	1st St	Greenville	Liv-Uninc	4	1.98	8		37.7	E	56.0	B
28	I-580 - EB	Greenville	N.Flynn	Uninc	4	1.50	8		31.4	E	35.4	E
29	I-580 - EB	N.Flynn	Grant Line	Uninc	4	3.19	8		44.0	D	47.2	D
30	I-580 - EB	Grant Line	I-205 (SJ Co) Off	Uninc	4	1.11	8		41.1	D	45.6	D
31	I-580 - WB	I-205 (SJ Co)	Grant Line	Liv - Uninc	4	0.89	8		33.5	E	38.0	E
32	I-580 - WB	Grant Line	N Flynn	Liv - Uninc	4	4.56	8		63.3	A	68.3	A
33	I-580 - WB	N Flynn	Greenville Rd	Liv - Uninc	4	2.34	8		63.0	A	66.8	A
34	I-580 - WB	Greenville Rd	1st St	Liv - Uninc	4	2.30	8		62.7	A	66.6	A
35	I-580 - WB	1st St	Portola Ave	Liv	4	2.52	8		61.2	A	63.7	A
36	I-580 - WB	Portola	SR 84/Airway Blvd	Liv	4	1.76	8		67.4	A	70.1	A
37	I-580 - WB	SR 84/Airway Blvd	Fallon Rd/El Charro	Liv	4	1.78	8		67.8	A	72.1	A
38	I-580 - WB	Fallon Rd/El Charr	Tassajara	Plea	4	1.16	8		61.3	A	64.8	A
39	I-580 - WB	Tassajara Rd	I-680	Plea	4	2.87	8		63.8	A	67.2	A

2010 LOS Monotoring Study Results for Freeways - PM Peak Period

		Segment Limits			Plan	Length	No of	Prior LOS "F"	2008 LOS Results		2010 LOS results	
	CMP Route	From	To	Jurisdiction	Area	(miles)	Lanes	(Years)	Speed	LOS	Speed	LOS
40	I-580 - WB	I-680	San Ramon Rd	Plea - Uninc	4	0.69	8		58.0	B	62.7	A
41	I-580 - WB	San Ramon Rd	Eden Caynon	Plea - Uninc	4	4.75	8		63.7	A	67.2	A
42	I-580 - WB	Eden Canyon	Center St	Plea - Uninc	4	2.28	8		65.4	A	70.5	A
43	I-580 - WB	Center	I-580/238	Unincorp	2	1.94	8	'00	54.7	C	60.3	A
44	I-580 - EB	I-80	I-980	Oak	1	1.24	8	91-'92, 08	27.3	(F30)	25.7	(F30)
45	I-580 - EB	I-980	Harrison	Oak	1	0.95	8	91-'92	41.0	D	41.1	D
46	I-580 - EB	Harrison	Lakeshore	Oak	1	0.69	8	08	28.4	(F30)	27.0	(F30)
47	I-580 - EB	Lakeshore	Coolidge	Oak	1	2.25	8		42.3	D	36.6	E
48	I-580 - EB	Coolidge	SH 13 Off	Oak	1	2.15	8		46.6	D	31.4	(F30)
49	I-580 - EB	SH 13 Off	MacArthur	Foothill	1	4.09	8		59.7	B	50.8	C
50	I-580 - EB	MacArthur	I-580/238	SL - Hay	2	4.33	8		67.0	A	67.4	A
51	I-580 - WB	I-238	Foothill/MacArthur	Oak -SL	2	4.42	8		70.9	A	70.9	A
52	I-580 - WB	Foothill/MacArthur	SH 13 Off	Oak -SL	1	3.89	8		63.9	A	61.9	A
53	I-580 - WB	SH 13 Off	Fruitvale	Oak	1	2.36	8		61.5	A	61.4	A
54	I-580 - WB	Fruitvale	Harrison	Oak	1	2.21	8		56.5	B	56.0	B
55	I-580 - WB	Harrison	SH 24 On-ramp	Oak	1	1.16	8		53.4	C	52.6	C
56	I-580 - WB	SH-24 On-ramp	I-80/580 Split	Oak	1	0.69	8	06	56.5	B	56.7	B
57	I-580 - EB	Central	I-80 Jct	Alb	1	0.77	4		44.6	D	45.9	D
58	I-580 - WB	I-80 Jct	Central	Alb	1	1.07	4		67.3	A	64.8	A
59	I-680 - NB	Scott Creek Rd	Rt 262/Mission	Fre	3	2.20	6		39.6	E	58.0	B
60	I-680 - NB	Rt 262/Mission	Durham Rd	Fre	3	1.34	6	08	19.7	(F20)	16.5	(F20)
61	I-680 - NB	Durham Rd	Washington Blvd	Fre	3	1.54	6	08	26.2	(F30)	20.4	(F30)
62	I-680 - NB	Washington Blvd	Rt 238/Mission	Fre	3	0.89	6		40.0	E	36.9	E
63	I-680 NB	SR 238/Mission	Vargas Rd	Unincorp	3	0.82	6		42.7	D	44.0	D
64	I-680 NB	Vargas Rd	Andrade Rd	Unincorp	3	2.64	6		37.3	E	28.1	(F30)
65	I-680 NB	Andrade Rd	Calaveras	Unincorp	3	1.13	6		46.8	D	33.3	E
66	I-680 NB	Calaveras	Rt.84/Vallecitos	Unincorp	3	0.30	6		60.7	A	59.2	B
67	I-680 NB	SR 84	Sunol Blvd	Plea - Uninc	4	3.45	6		64.9	A	67.0	A
68	I-680 NB	Sunol Blvd.	Bernal Ave	Plea - Uninc	4	1.52	6		62.4	A	64.3	A
69	I-680 NB	Bernal Ave	Stoneridge Dr	Plea	4	2.39	6		63.0	A	65.7	A
70	I-680 NB	Stoneridge Dr	I-580	Plea	4	0.84	6		64.0	A	70.1	A
71	I-680 - NB	I-580	Alcosta	Dub	4	1.83	6		58.8	B	62.4	A
72	I-680 - SB	Alcosta	I-580	Dub	4	1.84	6		67.2	A	69.0	A
73	I-680 SB	I-580	Stoneridge Dr	Plea	4	0.76	6		59.1	B	62.9	A
74	I-680 SB	Stoneridge Dr	Bernal	Plea	4	2.55	6		62.6	A	66.6	A
75	I-680 SB	Bernal Ave.	Sunol Blvd	Unincorp	4	1.31	6		59.3	B	61.1	A
76	I-680 SB	Sunol Blvd.	SR 84	Unincorp	4	3.82	6		66.4	A	68.6	A
77	I-680 SB	SR 84 (Niles Cany	Andrade Rd	Unincorp	3	1.32	6		62.2	A	64.7	A
78	I-680 SB	Andrade Rd	Sheridon Rd	Unincorp	3	1.39	6		60.8	A	61.5	A

2010 LOS Monotoring Study Results for Freeways - PM Peak Period

		Segment Limits			Plan	Length	No of	Prior LOS "F"	2008 LOS Results		2010 LOS results	
	CMP Route	From	To	Jurisdiction	Area	(miles)	Lanes	(Years)	Speed	LOS	Speed	LOS
79	I-680 SB	Sheridon Rd	Vargas Rd	Unincorp	3	0.81	6		63.6	A	66.5	A
80	I-680 SB	Vargas Rd	SR 238/Mission	Unincorp	3	1.08	6		60.3	A	63.2	A
81	I-680 - SB	Rt 238/Mission	Washington Blvd	Fre	3	1.04	6		62.7	A	65.9	A
82	I-680 - SB	Washington Blvd	Durham Rd	Fre	3	1.52	6		64.9	A	67.8	A
83	I-680 - SB	Durham Rd	Rt 2262/Mission	Fre	3	1.67	6		67.0	A	70.7	A
84	I-680 - SB	Rt 262/Mission	Scott Creek Rd	Fre	3	2.19	6		61.0	A	62.3	A
85	I-880 - NB	Dix Landing	SR 262/Mission	Fre	3	2.08	8	91-'92	33.7	E	52.1	C
86	I-880 - NB	SR 262/Mission	AutoMall Pkwy	Fre	3	2.44	8	96	45.8	D	42.0	D
87	I-880 - NB	AutoMall Pkwy	Stevenson	Fre	3	1.54	8	96	41.1	D	49.6	C
88	I-880 - NB	Stevenson	Decoto	Fre	3	4.04	8	96-'98	49.6	C	49.7	C
89	I-880 - NB	Decota	Alvarado Blvd	Fre - Un Cty	3	1.17	8	02	32.6	E	28.6	(F30)
90	I-880 - NB	Alcarado Blvd	Alvarado-Niles Blvd	Fre- Uni Cty	3	1.17	8	02	31.3	E	26.8	(F30)
91	I-880 - NB	Alv-Niles	Tennyson	Un Cty - Hay	3	2.65	8	00-02,06-08	23.2	(F30)	17.7	(F20)
92	I-880 - NB	Tennyson	SR 92	Hay	2	1.14	8	91-'92	39.6	E	37.7	E
93	I-880 - NB	SR 92	A St	Hay	2	1.52	8	91-'92	52.1	C	38.4	E
94	I-880 - NB	A St	I-238	Unincorp	2	1.82	8	94-'95	46.6	D	62.7	A
95	I-880 - NB	I-880/I238 (split)	Marina Blvd	Oak -SL	2	2.66	8		59.9	B	66.8	A
96	I-880 - NB	Marina Blvd	SR 112/Davis	Oak - SL	2	0.79	8		49.7	C	62.1	A
97	I-880 - NB	SR 112/Davis	Hegenberger	Oak - SL	2	1.88	8		58.6	B	56.5	B
98	I-880 - NB	Hegenberger	High/42nd	Oak	1	2.47	8		57.4	B	52.7	C
	I-880 - NB	**High/42nd**	**I-980**	**Oak**	**1**	**3.70**	**8**					
99	I-880 - NB	High/42nd	23rd (1st on)	Oak	1	1.06	8		61.9	A	64.5	A
100	I-880 - NB	23RD (1ST on)	Jct 980 (off)	Oak	1	2.64	8		54.6	C	57.7	B
	I-880 - NB	**I-980**	**I-880/80 Merge**	**Oak**	**1**	**3.78**						
101	I-880 - NB	Jct 980 (off)	I-880/I-80 split	Oak	1	2.38	8		60.9	A	60.8	A
102	I-880 - NB	I-880/I 80 (split)	I-880/I-80 (merge)	Oak	1	1.40	8		31.3	E	31.5	E
				Oak	1	3.17	6					
103	I-880 - SB	I-880/I-80 split	I-880/I-80 merge	Oak	1	1.63	8		61.1	A	65.3	A
104	I-880 - SB	I-880/I-80 merge	Jct 980	Oak	1	2.65	8		80.8	A	64.0	A
105	I-880 - SB	I-980	23rd	Oak	1	2.79	8	06	50.1	C	30.2	E
106	I-880 - SB	23rd St	High/42nd	Oak	1	1.35	8		68.9	A	67.9	A
107	I-880 - SB	High/42nd	Hegenberger	Oak	1	2.27	8	06	38.5	E	36.8	E
108	I-880 - SB	Hegenberger	SR 112/Davis	Oak - SL	1	1.69	8	91-'92,08	24.5	(F30)	37.6	E
109	I-880 - SB	SR 112/Davis	Marina Blvd	Oak - SL	1	0.87	8	91-'92	64.4	A	57.1	B
110	I-880 - SB	Marina Blvd	SR 238 WB (merge)	Oak - SL	1	2.41	8	91-'92	60.9	A	59.5	B
111	I-880 - SB	I-238	A St	SL-Uninc	2	2.03	8	91-'92, '00-02	56.2	B	32.3	E
112	I-880 - SB	A St	Rt 92	Hay	2	1.81	8		42.4	D	37.2	E
113	I-880 - SB	Rt 92	Tennyson	Hay	2	0.96	8	00	40.2	E	35.0	E
114	I-880 - SB	Tennyson	Alv-Niles	Hay - UC	2	2.49	8		46.4	D	45.9	D
115	I-880 - SB	Alv-Niles	Alvarado	UC - Fre	3		8		51.8	C	57.9	B

2010 LOS Monotoring Study Results for Freeways - PM Peak Period

		Segment Limits			Plan	Length	No of	Prior LOS "F"	2008 LOS Results		2010 LOS results	
	CMP Route	From	To	Jurisdiction	Area	(miles)	Lanes	(Years)	Speed	LOS	Speed	LOS
116	I-880 - SB	Alvarado	Decoto	UC - Fre	3		8		50.3	C	58.9	B
117	I-880 - SB	Decoto	Stevenson	Fre	3	4.07	8		54.1	C	58.9	B
118	I-880 - SB	Stevenson	AutoMall Pkwy	Fre	2	1.26	8		61.0	A	64.8	A
119	I-880 - SB	AutoMall Pkwy	Rt 262/Mission	Fre	2	3.04	8		44.2	D	62.4	A
120	I-880 - SB	SR 262/Mission	Dix Landing(off)	Fre	3	1.27	8	92,'06	61.1	A	64.1	A
121	I-980 - WB	SR 24 @ 580	I-880	Oak	1	2.27	8		65.2	A	64.8	A
122	I-980 - EB	I-880	SR 24 @ 580	Oak	1	2.32	8	'91	53.4	C	29.7	(F30)
123	SR 13 - NB	Mountain On	Carson/Redwood (1) (off)	Oak	1	1.20	4		85.3	A	88.8	A
124	SR 13 - NB	Carson/Redwood	Joaquin Miller	Oak	1	1.09	4		42.8	D	44.4	D
125	SR 13 - NB	Joa Miller/Linc	Moraga Ave	Oak	1	1.77	4		60.3	A	61.4	A
126	SR 13 - NB	Moraga Ave	Hiller (Sig)	Oak	1	1.57	4	06	40.7	E	24.2	(F30)
127	SR 13 - SB	Hiller Sig	Moraga Ave	Oak	1	1.66	4		56.0	B	57.2	B
128	SR 13 - SB	Moraga Ave	Joa Miller/Linc	Oak	1	2.04	4		70.3	A	71.2	A
129	SR 13 - SB	Joaq Miller/Lincoln	Redwood	Oak	1	1.34	4		61.8	A	61.4	A
130	SR 13 - SB	Redwood	Jct I-580 (EB Merge)	Oak	1	0.89	4	08	21.9	(F30)	12.5	(F20)
131	SR 24 - EB	I-580 (on ramp)	Broadway/SR 13	Oak	1	2.08	8	91-'97, '02, 06, 08	25.6	(F30)	15.8	(F20)
132	SR 24 - EB	Broadway/SR 13	Caldecott (enter)	Oak	1	1.41	8	91-'97,'02,06-08	16.9	(F20)	14.5	(F20)
133	SR 24 - EB	Caldecott (enter)	Fish Ranch Road	Oak	1	1.03	8	91-'97,'02,06	37.1	E	34.6	E
134	SR 24 - WB	Fish Ranch Road	Caldecott (exit)	Oak	1	0.99	8		51.5	C	50.9	C
135	SR 24 - WB	Caldecott (exit)	Broadway	Oak	1	1.77	8		67.4	A	69.4	A
136	SR 24 - WB	Broadway	Jct I-580 (on)	Oak	1	2.19	8		55.7	B	59.3	B
137	SR 84 - EB	San M CL	Toll Plaza	Fremont	3	2.97	6		53.3	C	56.2	B
138	SR 84 - EB	Toll Plaza	Thornton	Fremont	3	0.27	6	06	37.6	E	58.9	B
139	SR 84 - EB	Thornton	Newark Blvd/Ardenwood Blvd	Newark	3	1.23	6	08	25.5	(F30)	65.8	A
140	SR 84 - EB	Newark Blvd/Arde	I-880 NB (off)	Newark	3	0.97	6	08	15.8	(F20)	26.9	(F30)
141	SR 84 - WB	I-880 NB (off)	Ardenwood/Newark	Newark	3	0.99	6		40.5	E	45.9	D
142	SR 84 - WB	Ardenwood/Newar	Paseo Padre Pkwy		3	1.15	6		60.3	A	60.2	A
143	SR 84 - WB	Paseo Padre Pkw	Toll Gate		3	0.75	6		50.9	C	51.4	C
144	SR 84 - WB	Toll Plaza	San M CL	Fremont	2	3.17	6		65.5	A	64.8	A
145	SR 92 - EB	San M CL	Toll Plaza	Uninc - Hay	2	2.61	6	97-'02	62.0	A	65.9	A
146	SR 92 - EB	Toll Plaza	Clawiter	Uninc - Hay	2	1.76	6	91-'94, '96-'02	41.1	D	37.6	E
147	SR 92 - EB	Clawiter	I-880	Hay	2	2.10	6	91-92,94-'95,97-'02,06-08	10.5	(F20)	10.0	(F20)
148	SR 92 - WB	I-880	Clawiter	Hay	2	2.01	6		57.1	B	52.4	C
149	SR 92 - WB	Clawiter	Toll Plaza	Uninc - Hay	2	1.87	6	91-'92	48.8	D	45.6	D
150	SR 92 - WB	Toll Plaza	San M CL	Uninc - Hay	2	2.61	6		64.4	A	61.7	A

2010 LOS Monitoring Study Results - Arterials PM Peak Period

#	CMP Route	Segment Limits From	Segment Limits To	Juris	Length (miles)	Arterial Class	Plan Area	No of Lanes	Prior LOS "F" (Years)	2008 LOS Results Speed	2008 LOS Results LOS	2010 LOS Results Speed	2010 LOS Results LOS
1	150th St - EB	Hesperian	I-580	SL	0.51	II	2	2		14.2	D	17.0	D
2	150th St - WB	I-580	Hesperian	SL	0.51	II	2	2		11.0	E	16.5	D
3	A Street - EB	I-880	Western	Hay	1.08	II	2	2		20.9	C	23.3	C
4	A Street - EB	Western	SR 238	Hay	0.53	III	2	2		7.3	E	7.6	E
5	A Street - WB	SR 238	Western	Hay	0.53	III	2	2		12.7	D	13.5	C
6	A Street - WB	Western	I-880	Hay	1.08	II	2	2		20.6	C	21.8	C
7	Atlantic - EB	Main	Webster	Ala	0.80	II	1	2		17.9	D	20.7	C
8	Atlantic - WB	Webster	Main	Ala	0.80	II	1	2		24.3	B	23.7	C
9	Hegenberger - EB	SR 61	Edgewater	Oak	0.76					18.6	D	17.5	D
10	Hegenberger - EB	Edgewater	Baldwin	Oak	0.73	I	1	3		23.7	C	27.8	C
11	Hegenberger - EB	Baldwin	E 14th	Oak	1.03	I	1	3		32.6	B	25.1	C
12	Hegenberger - WB	E 14th	Baldwin	Oak	1.03	I	1	3		41.9	A	35.9	A
13	Hegenberger - WB	Baldwin	Edgewater	Oak	0.73	I	1	3		21.0	D	25.3	C
14	Hegenberger - WB	Edgewater	SR 61	Oak	0.76					26.5	C	20.0	D
15	Hesperian - NB	Tennyson	SH 92 - WB	Hay	0.47	I	2	3	06-08	8.6	(F)	15.0	E
16	Hesperian - NB	SH 92	La Playa	Hay	0.79	II	2	3	92	25.6	B	19.2	C
17	Hesperian - NB	La Playa	W.Winton Ave.	Hay	0.44	II	2	3	92,08	5.2	(F)	5.6	(F)
18	Hesperian - NB	W.Winton Ave	A St	Hay	0.96	II	2	3	92	16.4	D	18.1	C
19	Hesperian - NB	A St	Hacienda	Unin	0.65	II	2	2		17.0	D	19.5	C
20	Hesperian - NB	Hacienda	Grant	Unin	0.65	II	2	2		23.3	C	29.4	B
21	Hesperian - NB	Grant	Llewelling	Unin	0.28	II	2	2	00,04,06-08	8.6	(F)	8.1	(F)
22	Hesperian - NB	Llewelling	Springlake	Unin	0.40	II	2	2		23.9	C	23.3	C
23	Hesperian - NB	Springlake	Fairmont	SL	0.66	II	2	2		12.1	E	14.8	D
24	Hesperian - NB	Fairmont	14th	SL	0.32	II	2	2		15.9	D	13.7	E
25	Hesperian - SB	14th	Fairmont	SL	0.31	II	2	2	'91, '95, '97,08	8.6	(F)	12.4	E
26	Hesperian - SB	Fairmont	Springlake	SL	0.65	II	2	2	'91 - '92	17.9	D	18.8	C
27	Hesperian - SB	Springlake	Llewelling	Unin	0.40	II	2	2	'00	11.9	E	8.1	(F)
28	Hesperian - SB	Llewelling	Grant	Unin	0.28	II	2	2		18.5	C	13.8	E
29	Hesperian - SB	Grant	Hacienda	Unin	0.65	II	2	2		21.8	C	21.8	C
30	Hesperian - SB	Hacienda	A St	Unin	0.65	II	2	2		16.6	D	19.6	C
31	Hesperian - SB	A St	W.Winton Ave.	Hay	0.96	II				21.4	C	18.6	C
32	Hesperian - SB	W.Winton Ave	La Playa	Hay	0.44	II				20.7	C	24.8	B
33	Hesperian - SB	La Playa	SH 92	Hay	0.79	II				21.9	C	17.2	D
34	Hesperian - SB	SH 92 - WB	Tennyson	Hay	0.47	I	2	3	08	9.7	(F)	11.0	(F)
35	Mowry - EB	I-880	Farwell	Fre	0.34	II	3	2	'91 - '92	15.6	D	14.1	D
36	Mowry - EB	Farwell	SH 84	Fre	2.63	II	3	2		16.6	D	25.1	B
37	Mowry - WB	SH 84	Farwell	Fre	2.63	II	3	2		14.7	D	22.6	C
38	Mowry - WB	Farwell	I-880	Fre	0.34	II	3	2		22.1	C	20.9	C

2010 LOS Monitoring Study Results - Arterials PM Peak Period

#	CMP Route	Segment Limits		Juris	Length (miles)	Arterial Class	Plan Area	No of Lanes	Prior LOS "F" (Years)	2008 LOS Results		2010 LOS Results	
		From	To							Speed	LOS	Speed	LOS
39	Park/23rd - EB	Encinal	Santa Clara	Ala	0.23	III	1	2		11.9	D	21.3	B
40	Park/23rd - EB	Santa Clara	Kennedy	Ala	0.66	III	1	2		15.6	C	13.2	C
41	Park/23rd - EB	Kennedy	E 11th	Ala - Oak	0.45	II	1	2		24.2	B	13.9	E
42	Park/23rd - WB	E 11th	Kennedy	Ala - Oak	0.45	II	1	2		32.4	A	24.1	B
43	Park/23rd - WB	Kennedy	Santa Clara	Ala	0.66	III	1	2		13.1	C	12.9	D
44	Park/23rd - WB	Santa Clara	Encinal	Ala	0.23	III	1	2		11.4	D	12.8	D
45	MLK Jr Way -NB	SH 24	Adeline	Oak	0.90	II	1	2		16.8	D	18.1	C
46	Adeline - NB	MLK Jr - South	MLK Jr - North	Berk	0.30	II	1	2	04	13.8	E	18.8	C
47	Adeline - NB	MLK Jr - North	Shattuck/Adeline	Berk	0.63	II	1	2		14.4	D	15.5	D
48	Shattuck NB	Shattuck/Adeline	Dwight	Berk	0.32	II	1	2		13.2	E	17.2	D
49	Shattuck NB	Dwight	University	Berk	0.63	III	1	2		10.9	D	14.9	C
50	Shattuck SB	University	Dwight	Berk	0.63	III	1	2		12.6	D	13.5	C
51	Shattuck SB	Dwight	Shattuck/Adeline	Berk	0.32	II	1	2		24.2	B	22.5	C
52	Adeline - SB	Shattuck/Adeline	MLK Jr - North	Berk	0.63	II	1	2		12.4	E	13.1	E
53	Adeline - SB	MLK Jr - North	MLK Jr - South	Berk	0.30	II	1	2	'95, '00	11.5	E	20.0	C
54	MLK Jr Way -SB	Adeline	SH 24	Oak	0.88	II	1	2		19.1	C	21.7	C
55	Tennyson - EB	Hesperian	I-880	Hay	0.88	I	2	2	06	14.2	E	22.0	C
56	Tennyson - EB	I-880 NB	Rt 238	Hay	1.55	II	2	2		19.5	C	19.9	C
57	Tennyson - WB	Rt 238	I-880	Hay	1.63	II	2	2		20.9	C	19.2	C
58	Tennyson - WB	I-880	Hesperian	Hay	0.85	I	2	2		21.4	D	21.6	D
59	University - EB	I-80 SB	6th	Berk	0.40	II	1	2		16.8	D	26.7	B
60	University - EB	6th	San Pablo	Berk	0.31	II	1	2		16.7	D	19.0	C
61	University - EB	San Pablo	Sacramento	Berk	0.56	II	1	2		18.0	C	11.5	E
62	University - EB	Sacramento	ML King	Berk	0.48	II	1	2		18.1	C	18.9	C
63	University - EB	ML King	Shattck Pl	Berk	0.30	III	1	2		11.9	D	17.0	C
64	University - WB	Shattck Pl	ML King	Berk	0.30	III	1	2		11.8	D	13.7	C
65	University - WB	ML King	Sacramento	Berk	0.48	II	1	2		23.2	C	19.2	C
66	University - WB	Sacramento	San Pablo	Berk	0.56	II	1	2		13.7	E	12.6	E
67	University - WB	San Pablo	6th	Berk	0.31	II	1	2	'98	16.7	D	17.9	D
68	University - WB	6th	I-80 SB	Berk	0.40	II	1	2		36.3	A	38.9	A
69	SR 13 Ashby - WB	Hiller	Domingo	Oak - Berk	0.79	II	1	2		22.0	C	25.6	B
70	SR 13 Ashby - WB	Domingo	College	Berk	0.50	III	1	1		17.1	C	18.0	C
71	SR 13 Ashby - WB	College	Telegraph	Berk	0.38	III	1	1		14.2	C	11.0	D
72	SR 13 Ashby - WB	Telegraph	Shattuck	Berk	0.38	III	1	1	'91 - '92	14.5	C	12.5	D
73	SR 13 Ashby - WB	Shattuck	ML King	Berk	0.24	III	1	1	'91 - '92	8.1	E	9.2	D
74	SR 13 Ashby - WB	ML King	San Pablo	Berk	0.87	III	1	1		16.3	C	13.8	C
75	SR 13 Ashby - WB	San Pablo	I-80 Ramps	Berk	0.64	II	1	2		27.2	B	22.0	C
76	SR 13 Ashby - EB	I-80	San Pablo	Berk	0.61	II	1	2		16.9	D	19.8	C
77	SR 13 Ashby - EB	San Pablo	ML King	Berk	0.87	III	1	1		21.1	B	17.9	C
78	SR 13 Ashby - EB	ML King	Shattuck	Berk	0.24	III	1	1		11.2	D	8.6	E
79	SR 13 Ashby - EB	Shattuck	Telegraph	Berk	0.38	III	1	1		16.3	C	13.4	C
80	SR 13 Ashby - EB	Telegraph	College	Berk	0.38	III	1	1		13.1	C	7.3	E
81	SR 13 Ashby - EB	College	Domingo	Berk	0.50	III	1	1	91,00,04	9.9	D	6.5	(F)
82	SR 13 Ashby - EB	Domingo	Hiller	Berk - Oak	0.79	II	1	2		23.2	C	24.0	C

2010 LOS Monitoring Study Results - Arterials PM Peak Period

#	CMP Route	Segment Limits From	Segment Limits To	Juris	Length (miles)	Arterial Class	Plan Area	No of Lanes	Prior LOS "F" (Years)	2008 LOS Results Speed	2008 LOS Results LOS	2010 LOS Results Speed	2010 LOS Results LOS
83	SR 61 - SB	Atlantic	Cent/Webster	Ala	0.55	III	1	2		14.3	C	11.5	D
84	SR 61 - SB	Cent/Webster	Sher/Encino	Ala	0.73	II	1	2		20.7	C	23.1	C
85	SR 61 - SB	Sher/Encino	Park	Ala	1.22	II	1	1		20.0	C	19.2	C
86	SR 61 - SB	Park	High/Otis	Ala	1.06	II	1	1		20.4	C	20.2	C
87	SR 61 (Doolittle) - SB*	High	Island Dr	Ala	0.41	II	1	2		18.7	C	17.8	D
88	SR 61 (Doolittle) - SB*	Island Dr	Harbor Bay Pkwy	Ala	0.50	I	1	2		37.6	A	31.9	B
89	SR 61 - SB	Harbor Bay	Airport Dr	Oak	2.15	I	1	1		37.6	A	33.0	B
90	SR 61 (Doolittle) - SB	Airport	Davis	Oak - SL	0.95	I	1	2		30.9	B	39.5	A
91	SR 61 (Doolittle) - NB	Davis	Airport	SL - Oak	0.95	I	2	2		29.3	B	33.1	B
92	SR 61 - NB	Airport Dr	Harbor Bay	Ala	2.15	I	1	1		58.8	A	36.2	A
93	SR 61 (Doolittle)-NB*	Harbor Bay	Island Dr	Ala	0.50	I	1	2		23.8	C	27.5	B
94	SR 61 (Doolittle)-NB*	Island Dr	High/Otis	Ala	0.41	II	1	2		27.2	B	18.6	C
95	SR 61 - NB	High/Otis	Park	Ala	1.06	II	1	1		19.4	C	25.5	B
96	SR 61 - NB	Park/Encinal	Sher/Cent	Ala	1.22	II	1	1		20.9	C	18.0	C
97	SR 61 - NB	Sher/Cent	Web/Cent	Ala	0.73	II	1	2		14.6	C	21.0	C
98	SR 61 - NB	Cent/Web	Atlantic	Ala	0.55	III	1	2		29.8	A	16.3	C
99	SR 77 (42nd) - EB	I-880 NB	E 14th	Oak	0.32	I	1	2		24.3	C	27.7	C
100	SR 77 (42nd) - WB	E 14 th	I-880 NB	Oak	0.30	I	1	2		37.9	A	33.4	B
101	Decoto - WB	SH 238/Mission	Union Square	UC	0.85	II	3	2		20.9	C	19.7	C
102	Decoto - WB	Union Square	Alv-Niles Rd	UC	0.25	II	3	2	91-94,96,98,'00-04,06	10.5	E	14.6	D
103	Decoto - WB	Alv-Niles Rd	Fremont CL	UC	0.66	II	3	2		18.9	C	27.7	B
104	Decoto - WB	Fremont CL	I-880 NB (off)	Fre	1.15	II	3	2		23.2	C	22.0	C
105	Decoto - EB	I-880 NB (off)	Union City CL	Fre	1.15	II	3	2		20.8	C	19.2	C
106	Decoto - EB	Union City CL	Alv-Niles Rd	UC	0.66	II	3	2		20.1	C	13.6	E
107	Decoto - EB	Alv-Niles Rd	Union Square	UC	0.25	II	3	2		18.1	C	18.7	C
108	Decoto - EB	Union Square	SH 238/Mission	UC	0.85	II	3	2		17.5	D	20.7	C
109	SR 84/Mowry (Fre)-WB	SH 238	Peralta	Fre	0.78	I	3			31.9	B	31.9	B
110	SR 84/Peralta (Fre)-WB	Mowry	Fremont	Fre	1.66	I	3			27.5	C	24.8	C
111	SR 84/Fremont(Fre)-WB	Peralta	Thornton	Fre	0.33	II	3		91-92, 94, 02	10.9	E	10.3	E
112	SR 84/Thornton(Fre)-WB	Fremont	I-880 SB	Fre	1.29	II	3			31.4	A	24.7	B
113	SR 84/Thornton (Fre)-EB	I-880 SB	Fremont	Fre	1.29	II	3	4		22.3	C	20.8	C
114	SR 84/Fremont (Fre)-EB	Thornton	Peralta	Fre	0.32	II	3	4		11.6	E	10.2	E
115	SR 84/Peralta (Fre) - EB	Fremont	Mowry	Fre	1.64	I	3	2		26.4	C	25.2	C
116	SR 84/Mowry (Fre) - EB	Peralta	SH 238	Fre	0.87	I	3	4(2)	'00	26.9	C	18.8	D
117	1st Street - SB	I-580 Off	N Mines	Liv	0.61	I				21.5	D	21.6	D
118	1st Street - SB	N Mines	Inman	Liv	1.05	I				39.5	A	31.4	B
119	1st Street - NB	Inman	N Mines	Liv	1.05	I				26.0	C	28.7	B
120	1st Street - NB	N Mines	I-580 Off	Liv	0.61	I				28.9	B	31.2	B

2010 LOS Monitoring Study Results - Arterials PM Peak Period

#	CMP Route	Segment Limits From	Segment Limits To	Juris	Length (miles)	Arterial Class	Plan Area	No of Lanes	Prior LOS "F" (Years)	2008 LOS Results Speed	2008 LOS Results LOS	2010 LOS Results Speed	2010 LOS Results LOS
121	SR 84 - EB	SR 238/Mission	Union City Limit	Fre	1.59	41.9	3	2		34.9	B	38.4	A
122	SR 84 - EB	Union City Limit	Palamoras	Fre	0.94	44.5	3	2		39.6	A	42.1	A
123	SR 84 - EB	Palamoras	Niles Cnyn Quarry	Fre	2.16	43.8	3	2		42.0	A	42.5	A
124	SR 84 - EB	Niles Cnyn Quarry	Sunol Rd	Fre	1.75	46.7	3	2		45.9	A	45.5	A
125	SR 84 - EB	Sunol Rd	Plea-Sunol Rd	Fre	0.53	27.6	3	2	08	5.2	F	4.7	(F)
126	SR 84 - EB	Ple-Sunol Rd	SR 84 (Off)/I-680	Unin	0.77	42.9	4	2	02-04,06	41.4	B	44.0	A
127	SR 84 - EB	SR 84 (Off)/I-680	Vallecitos Ln	Unin	1.07	50.8	4	2	02-04,06-08	23.6	F	11.7	(F)
128	SR 84 - EB*	Vallecitos Ln	Vallecitos Nuc.Cntr	Unin	1.14	57.5	4	2	02-04,06			31.6	E
129	SR 84 - EB*	Vallecitos Nuc Center Ent.	Culvert (Lat/Long: 37.(	Unin	1.65	58.3	4	2		38.7	C	44.5	C
130	SR 84 - EB*	Culvert (Lat/Long: 37.61385	Ruby Hill /Kaithoff	Unin	1.62	59.2	4	2				59.1	A
131	SR 84 - EB*	Ruby Hill./Kaithoff	Isabel/Vallecitos	Unin	0.38	I	4	2				29.4	A
132	SR 84 (Liv) - NB	Isabel/Vallecitos	Vineyard	Liv	1.12	I	4	2		40.7	A	37.0	A
133	SR 84 (Liv) - NB*	Vineyard	Concannon	Liv	0.60	I	4	2		38.4	A	34.7	B
134	SR 84 (Liv) - NB*	Concannon	Stanley	Liv	1.07	I	4	2				36.7	A
135	SR 84 (Liv) - NB*	Stanley	W. Jack London Blvd.	Liv	0.88	I	4	2		36.0	A	38.3	A
136	SR 84 (Liv) - NB*	W. Jack London Blvd.	Airway/Kitty Hawk	Liv	0.49	I	4	2				26.6	C
137	SR 84 (Liv) - NB	Airway/Kitty	I-580 (Off)	Liv	1.06	I	4	2		27.3	C	26.2	C
138	SR 84 (Liv) - SB	I-580 (On)	Airway/Kitty Hawk	Liv	1.06	I	4	2		26.8	C	28.8	B
139	SR 84 (Liv) - SB*	Airway/Kitty	W. Jack London Blvd.	Liv	0.49	I	4	2		46.2	A	37.2	A
140	SR 84 (Liv) - SB*	W. Jack London Blvd.	Stanley	Liv	0.90	I	4	2				50.4	A
141	SR 84 (Liv) - SB*	Stanley	Concannon	Liv	1.05	I	4	2		40.8	A	46.1	A
142	SR 84 (Liv) - SB*	Concannon	Vineyard	Liv	0.60	I	4	2				43.0	A
143	SR 84 (Liv) - SB	Vineyard	Isabel/Vallecitos	Liv	1.12	I	4	2		46.1	A	42.9	A
144	SR 84 - WB*	Isabel/Vallecitos	Ruby Hill /Kaithoff	Liv	0.38	I	4	2		45.7	A	36.3	A
145	SR 84 - WB*	Ruby Hill /Kaithoff	Culvert (Lat/Long: 37.(	Pleas	1.62	55.8	4	2				58.3	A
146	SR 84 - WB*	Culvert (Lat/Long: 37.61385	Vallecitos Nuc.Cntr	Unin	1.65	56.5	4	2				57.5	A
147	SR 84 - WB*	Vallecitos Nuc.Cntr	Vallecitos Ln	Unin	1.14	52.5	3	2		42.8	B	54.9	A
148	SR 84 - WB*	Vallecitos Ln	SR 84/I-680 NB On	Unin	0.21	55.3	3	2				57.7	A
149	SR 84 - WB*	SR 84/I-680 NB On	Ple-Sunol Rd	Fre	1.27	41.4	3	2				43.4	A
150	SR 84 - WB	Ple-Sunol Rd	Sunol Rd	Fre	0.53	41.9	3	2		35.5	B	39.9	A
151	SR 84 - WB	Sunol Rd	Niles Canyon Quarry	Fre	1.75	48.5	3	2		49.8	A	46.9	A
152	SR 84 - WB	Niles Canyon Quarry	Fremont City Limit	Fre	1.00	47.5	3	2		47.8	A	46.1	A
153	SR 84 - WB	Fremont City Limit	Union City Limit	Fre	2.10	41.8	3	2		29.1	D	43.6	A
154	SR 84 - WB	Union City Limit	SR 238	Fre	1.62	31.7	3	2		38.3	B	28.9	A
155	SR 92 - EB	I-880	Mission	Hay	1.59	II	2	3	'91 - '92	16.2	D	15.4	D
156	SR 92 - WB	Mission	I-880	Hay	1.59	II	2	3		29.0	B	23.4	C
157	SR 112 (Davis) - EB	Doolittle/Davis	I-880	SL	0.51	II	2	2		13.8	E	15.1	D
158	SR 112 (Davis) - EB	I-880	San Leandro	SL	1.01	II	2	2	'91	19.3	C	17.2	D
159	SR 112 (Davis) - EB	San Leandro	E 14th	SL	0.28	III	2	2		13.7	C	16.0	C
160	SR 112 (Davis) - WB	E 14th	San Leandro	SL	0.28	III	2	2		14.5	C	13.2	C
161	SR 112 (Davis) - WB	San Leandro	I-880	SL	1.00	II	2	2		26.3	B	25.1	B
162	SR 112 (Davis) - WB	I-880	Doolittle	SL	0.51	II	2	2		21.8	C	15.5	D

2010 LOS Monitoring Study Results - Arterials PM Peak Period

#	CMP Route	Segment Limits From	Segment Limits To	Juris	Length (miles)	Arterial Class	Plan Area	No of Lanes	Prior LOS "F" (Years)	2008 LOS Results Speed	2008 LOS Results LOS	2010 LOS Results Speed	2010 LOS Results LOS
163	SR 123 San Pablo - SB	Carlson	Washington	Alb	0.53	II	1	2		26.8	B	25.5	B
164	SR 123 San Pablo - SB	Washington	Marin	Alb	0.44	III	1	2		11.6	D	17.1	C
165	SR 123 San Pablo - SB	Marin	Gilman	Alb - Berk	0.47	II	1	2		16.0	D	17.0	D
166	SR 123 San Pablo - SB	Gilman	University	Berk	0.86	II	1	2		19.5	C	18.3	C
167	SR 123 San Pablo - SB	University	Allston	Berk	0.20	III	1	2		16.1	C	18.6	C
168	SR 123 San Pablo - SB	Allston	Dwight	Berk	0.4	II				18.7	C	18.2	C
169	SR 123 San Pablo - SB	Dwight	Ashby	Berk	0.68	II				13.8	E	20.2	C
170	SR 123 San Pablo - SB	Ashby	Stanford	Berk	0.81	II	1	2		16.0	D	17.8	D
171	SR 123 San Pablo - SB	Stanford	53rd	Oak	0.27	II	1	2		25.5	B	26.3	B
172	SR 123 San Pablo - SB	53rd	Park	Emer	0.34	II	1	2		15.4	D	18.0	D
173	SR 123 San Pablo - SB	Park	35th	Emer - Oak	0.45	II	1	2	'91	13.2	E	14.3	D
174	SR 123 San Pablo - NB	35th	Park	Oak - Emer	0.45	II	1	2		15.4	D	18.4	C
175	SR 123 San Pablo - NB	Park	53rd	Emer	0.34	II	1	2		24.8	B	28.5	B
176	SR 123 San Pablo - NB	53rd	Stanford	Oak	0.27	II	1	2	02	20.5	C	22.2	C
177	SR 123 San Pablo - NB	Stanford	Ashby	Oak	0.81	II	1	2		12.5	E	19.0	C
178	SR 123 San Pablo - NB	Ashby	Dwight	Berk	0.68	II				20.8	C	19.4	C
179	SR 123 San Pablo - NB	Dwight	Allston	Berk	0.4	II				23.6	C	24.9	B
180	SR 123 San Pablo - NB	Allston	University	Berk	0.20	III	1	2	'98, '00,06	8.8	E	5.8	(F)
181	SR 123 San Pablo - NB	University	Gilman	Berk	0.86	II	1	2		17.0	D	19.8	C
182	SR 123 San Pablo - NB	Gilman	Marin	Alb - Berk	0.47	II	1	2		10.3	E	15.7	D
183	SR 123 San Pablo - NB	Marin	Washington	Alb	0.45	III	1	2	08	6.2	(F)	24.1	B
184	SR 123 San Pablo - NB	Washington	Carlson	Alb	0.53	II	1	2		16.9	D	17.1	D
185	SR 185 (14th) - SB	42nd	46th St	Oak	0.26	II				17.6	D	16.8	D
186	SR 185 (14th) - SB	46th St	Seminary	Oak	0.79	II				23.2	C	23.8	C
187	SR 185 (14th) - SB	Seminary	73rd	Oak	0.80	II	1	2		18.0	D	13.2	E
188	SR 185 (14th) - SB	73rd Ave	98th Ave	Oak	1.39	II	1	2		17.5	D	20.4	C
189	SR 185 (14th) - SB	98th	Broadmoor	Oak	0.74	II	1	2		19.8	C	18.7	C
190	SR 185 (14th) - SB	Broadmoor	Davis	SL	0.73	II	2	2		19.8	C	15.9	D
191	SR 185 (14th) - SB	Davis	San Leandro	SL	1.04	III	2	2		20.3	B	17.2	C
192	SR 185 (14th) - SB	San L Blvd	Hesperian	SL	0.94	II	2	2		22.7	C	22.4	C
193	SR 185 (14th) - SB	Hesperian	Bayfair	SL	0.46	II	2	2		15.9	D	16.5	D
194	SR 185 (14th) - SB	Bayfair	170th	Unin	1.24	II	3	2		27.1	B	19.8	C
195	SR 185 (14th) - SB	170th	Llewelling	Unin	0.21	II	3	2		28.5	B	19.0	C
196	SR 185 (14th) - SB	Llewelling	Sunset	Unin	1.02	II	3	2		20.2	C	27.3	B

2010 LOS Monitoring Study Results - Arterials PM Peak Period

#	CMP Route	Segment Limits		Juris	Length (miles)	Arterial Class	Plan Area	No of Lanes	Prior LOS "F" (Years)	2008 LOS Results		2010 LOS Results	
		From	To							Speed	LOS	Speed	LOS
197	SR 185 Hayward - SB	Sunset	SR 92/238	Hay	0.84	III	2	2		15.8	C	11.4	D
198	SR 185 Hayward - NB	SR 92/238	Sunset	Hay	0.84	III	2	2		15.8	C	17.0	C
199	SR 185 (14th) - NB	Sunset	Llewelling	Unin	1.11	II	3	2		18.5	C	26.3	B
200	SR 185 (14th) - NB	Llewelling	170th	Unin	0.21	II	3	2		32.9	A	31.5	A
201	SR 185 (14th) - NB	170th	Bayfair	Unin	1.24	II	3	2		18.7	C	25.3	B
202	SR 185 (14th) - NB	Bayfair	Hesperian	SL	0.47	II	2	2		19.8	C	23.5	C
203	SR 185 (14th) - NB	Hesperian	San L Blvd	SL	0.94	II	2	2		24.9	B	22.8	C
204	SR 185 (14th) - NB	San Leandro	Davis	SL	1.02	III	2	2		17.5	C	15.6	C
205	SR 185 (14th) - NB	Davis	Broadmoor	SL	0.72	II	2	2		21.4	C	21.5	C
206	SR 185 (14th) - NB	Broadmoor	98th	Oak	0.74	II	1	2		18.0	C	16.2	D
207	SR 185 (14th) - NB	98th Ave	73rd Ave	Oak	1.37	II	1	2		17.1	D	18.2	C
208	SR 185 (14th) - NB	73rd Ave	Seminary	Oak	0.60	II	1	2		14.5	D	13.1	E
209	SR 185 (14th) - NB	Seminary	46th St	Oak	0.79	II				22.0	C	25.9	B
210	SR 185 (14th) - NB	46th St	42nd	Oak	0.26	II			08	7.3	(F)	7.3	(F)
211	SR 238 (Foothill) - NB	Jackson	City Center	Hay	0.62	III	2	3		15.8	C	17.3	C
212	SR 238 (Foothill) - NB	City Center	I-580	Unin-Hay	0.73	II	3	3		19.4	D	20.7	C
213	SR 238 (Foothill) - NB	I-580 Ramp	I-580 Merge	Unin	0.71	I	3			46.1	A	45.1	A
214	SR 238 (Foothill) - SB	I-580	Cstro V Blvd	Unin	0.86	I	3			43.0	A	47.3	A
215	SR 238 (Foothill) - SB	Cstro V Blvd	City Center	Hay-Unin	1.03	II	2	3		19.3	C	27.2	B
216	SR 238 (Foothill) - SB	City Center	Jackson	Hay	0.62	III	2	3		10.4	D	16.2	C
217	SR 238 (Mission) - NB	680 NB Rmp	Stevenson	Fre	2.46	I	3	2		37.7	A	41.4	A
218	SR 238 (Mission) - NB	Stevenson	Nursery	Fre	2.57	I	3	2		32.1	B	30.4	B
219	SR 238 (Mission) - NB	Nursery	Tamarack	UC	2.10	I	3	2		28.1	B	28.7	B
220	SR 238 (Mission) - NB	Tamarack	Industrial	UC-Hay	1.96	I	3	2		29.0	B	26.1	C
221	SR 238 (Mission) - NB	Industrial	Sorenson	Hay	1.47	II	2	2		23.4	C	27.1	B
222	SR 238 (Mission) - NB	Sorenson	Jackson	Hay	1.83	II	2	2		16.0	D	15.8	D
				Hay									
223	SR 238 (Mission) - SB	Jackson	Sorenson	Hay	1.83	II	2	2	'91 - '92	13.3	E	23.3	C
224	SR 238 (Mission) - SB	Sorenson	Industrial	Hay	1.47	II	2	2		25.9	B	22.4	C
225	SR 238 (Mission) - SB	Industrial	Tamarack	Hay-UC	1.96	I	2	2		30.2	B	32.7	B
226	SR 238 (Mission) - SB	Tamarack	Nursery	UC	2.07	I	3	2		23.5	C	24.4	C
227	SR 238 (Mission) - SB	Nursery	Stevenson	Fre	2.57	I	3	2		29.6	B	30.5	B
228	SR 238 (Mission) - SB	Stevenson	680 NB Rmp	Fre	2.46	I	3	2		24.6	C	31.0	B
229	SR 260 (Tubes) - NB	Atlantic	7th/Web	Oak	1.31	I	1	2		29.8	A	34.7	A
230	SR 260 (Tubes) - SB	7th/Web	Atlantic	Oak	1.31	I	1	2	'91	29.0	A	31.6	A
231	SR 262 (Mission) - EB	I-880 NB	I-680 NB	Fre	1.33	I	3	2		19.2	D	16.1	E
232	SR 262 (Mission) - WB	I-680 NB	I-680 SB	Fre	1.11	I	3	2		35.6	A	25.6	C

Note * denotes the longer roadway segments that were split into short segments in 2009 CMP Update. The short segments have been used in the 2010 LOS Monitoring Study.

- Free Flow Speeds for the portion of SR 84 classified as Rural have been re-assessed in the 2010 LOS Monitoring Study

2010 LOS Monitoring Study Results- Ramps and Special Segments for PM Peak Period

#	CMP Route	Segment Limits		Jurisdiction	Plan Area	Length (miles)	No of Lanes	Free Flow Speed	Prior LOS "F" (Years)	2008 LOS Results		2010 LOS Results	
		From:	To:							Speed	LOS	Speed	LOS
1	I-80/I-580 Interchange	I-80 SB	I-580 EB	Oak	1	0.30	1	38.0	91-92, 97-02	34.4	A	31.0	B
2	I-80/I-580 Interchange	I-580 WB	I-80 NB	Oak	1	0.41	1	40.0	91-92, 98	35.4	B	40.1	A
3	SR 24 WB/I-580 WB	SR 24 ON	I-580 OFF	Oak	1	0.69	2	Weaving	95	41.3	n/a	44.6	n/a
4	I-580/SR 24 Interchange	I-580 WB	SR-24 EB	Oak	1	0.51	2	45.0		38.1	B	25.4	E
5	I-580/SR 24 Interchange	SR-24 WB	I-580 EB	Oak	1	0.74	2	51.0	06	43.9	B	30.1	E
6	SR13/SR 24 Interchange	SR-13 NB	SR-24 EB	Oak	1	0.32	1	40.0	92-'04, '06, '08	6.2	(F)	9.8	• (F) •
7	SR13/SR 24 Interchange	SR-24 WB	SR-13 SB	Oak	1	0.16	1	31.0		33.2	A	32.7	A
8	I-880/I-238 Interchange	I-880 SB	I-238 EB	SL	2	0.74	2	47.0	93-'95, '97	54.5	A	52.8	A
9	I-880/I-238 Interchange	I-238 WB	I-880 NB	SL	2	0.54	1	54.0		70.7	A	74.8	A
10	I-880/I-238 Interchange	I-880 NB	I-238 EB	SL	2	0.42	1	32.0		29.4	A	59.3	A
11	I-880/I-238 Interchange	I-238 WB	I-880 SB	SL	2	0.76	1	53.0		73.6	A	78.2	A
12	I-580 /I-238 Interchange	I-580 SB	I-238 EB	Hay	2	0.35	1	37.0		20.0	E	21.6	E
13	I-580 /I-238 Interchange	I-238 WB	I-580 NB	Hay	2	0.32	1	38.0		35.6	A	37.2	A
25	I-580/I-680 Interchange	I-580 EB	I-680 NB	Pleas	4	0.46	1	35.0		20.1	E	24.5	C
15	I-580/I-680 Interchange	I-580 EB	I-680 SB	Pleas	4	0.28	1	42.0		23.7	E	26.0	D
16	I-580/I-680 Interchange	I-680 NB	I-580 EB	Pleas	4	0.90	2	63.8	93	59.3	A	58.2	A
17	I-580/I-680 Interchange	I-680 NB	I-580 WB	Pleas	4	0.66	1	41.0		41.6	A	49.7	A
18	I-580/I-680 Interchange	I-580 WB	I-680 NB	Pleas	4	0.41	1	51.5		42.8	B	45.7	B
19	I-580/I-680 Interchange	I-580 WB	I-680 SB	Pleas	4	0.66	1	39.0	08	19.2	(F)	31.3	B
20	I-580/I-680 Interchange	I-680 SB	I-580 EB	Pleas	4	1.23	2	68.1	92,02	55.8	B	65.4	A
21	I-580/I-680 Interchange	I-680 SB	I-580 WB	Pleas	4	0.43	1	58.4	02	53.0	A	50.9	B
22	I-880/SR 260 Connection*	I-880 SB	SR-260 WB	Oak	1	0.99	1	32.0		unqualified data		17.2	E
23	I-880/SR 260 Connection	SR-260 EB	I-880 NB	Oak	1	0.36	1	35.0	98, 08	13.3	(F)	15.7	(F)

*Starting from the 2010 LOS Monitoring runs, the travel route has been changed to the correct route of I-880 SB ramp exit to 5th Street and then connecting to Webster Tube from Broadway/5th Street intersection under the I-880 bridge.

2010 LOS Monitoring Study Results for Freeways - AM Peak Period

	CMP Route	Segment Limits		Jurisdiction	Plan Area	Length (miles)	No of Lanes	Prior LOS F (Years)	2008 LOS results		2010 LOS results	
		From	To						Speed	LOS	Speed	LOS
1	I-80 - EB	SF County Line	Toll Plaza	Oak	1	2.06	10		57.8	B	57.3	B
2	I-80 - EB	Toll Plaza	I-580 SB Merge	Oak	1	1.15	10		58.1	B	55.8	B
3	I-80 - EB	I-80/I-580 (Merge)	Powell	Emery - Berk	1	0.79	10		74.3	A	75.5	A
4	I-80 - EB	Powell	Ashby	Emery - Berk	1	0.67	10		51.8	C	54.6	C
5	I-80 - EB	Ashby	University	Emery - Berk	1	1.34	10		64.2	A	66.2	A
6	I-80 - EB	University	Jct I-580 (off)	Berk - Alb	1	1.51	10		68.4	A	66.2	A
7	I-80 - EB	Jct I-580 (off)	Central (on)	Berk - Alb	1	1.12	10		62.9	A	64.0	A
8	I-80 - WB	Central	Jct I-580	Berk - Alb	1	0.70	10	97,00-02, 06-08	24.6	**(F30)**	37.0	E
9	I-80 - WB	Jct I-580	University	Berk - Alb	1	1.49	10	97,00-02, 06-08	25.6	**(F30)**	33.3	E
10	I-80 - WB	University	Ashby	Emery - Berk	1	1.36	10	97,00	43.6	D	50.9	C
11	I-80 - WB	Ashby	Powell	Emery - Berk	1	0.64	10	97,00	44.2	D	45.4	D
12	I-80 - WB	Powell	I-80/I-580 (Split)	Emery - Berk	1	0.42	10	97,00	40.2	E	46.3	D
13	I-80 - WB	I-580 Split	Toll Plaza	Oak	1	1.20	10	97-08	4.6	**(F10)**	8.1	**(F10)**
14	I-80 - WB	Toll Plaza	SF County	Oak	1	2.00	10	97-08	10.9	**(F20)**	13.4	**(F20)**
15	I-238 - EB	I-880	I-580	Uninc-San L	2	2.28	6		49.8	C	63.5	A
16	I-238 - WB	I-580	I-880	Uninc-San L	2	1.60	6	97-08	15.9	**(F20)**	32.1	E
17	I-580 - EB	I-580/I-238 changed fm (I-238/Fthl Off)	Grove	Unincorp	2	2.88	8		58.1	B	55.5	B
18	I-580 EB	Grove	Eden Canyon	Uninc - Pleas	4	2.17	8		69.1	A	64.6	A
19	I-580 EB	Eden Canyon	San Ramon/ Foothill	Uninc - Pleas	4	4.80	8		60.5	A	61.9	A
20	I-580 EB	San Ramon/ Foothill	I-680	Uninc - Pleas	4	0.77	8		63.0	A	68.9	A
21	I-580 EB	I-680	Hopyard	Plea	4	0.76	8		58.0	B	63.8	A
22	I-580 EB	Hopyard	Santa Rita	Plea	4	1.96	8		61.5	A	68.8	A
23	I-580 EB	Santa Rita	El Charro	Uninc-Pleas	4	1.24	8		62.3	A	68.4	A
24	I-580 EB	El Charro	SR 84/Airway Blvd.	Unincorp	4	1.52	8		63.5	A	67.8	A
25	I-580 EB	SR 84/Airway Blvd.	Portola	Unincorp	4	1.71	8		62.3	A	67.2	A
26	I-580 - EB	Portola	1st St	Liv	4	2.70	8		63.0	A	66.3	A
27	I-580 - EB	1st St	Greenville	Liv-Uninc	4	1.98	8		52.0	C	55.5	B
28	I-580 - EB	Greenville	N.Flynn	Uninc	4	1.50	8		40.3	E	43.2	D
29	I-580 - EB	N.Flynn	Grant Line	Uninc	4	3.19	8		47.1	D	50.4	C
30	I-580 - EB	Grant Line	I-205 (SJ Co) Off	Uninc	4	1.11	8		43.6	D	47.0	D
31	I-580 - WB	I-205 (SJ Co)	Grant Line	Liv - Uninc	4	0.89	8	04	32.2	E	36.0	E
32	I-580 - WB	Grant Line	N Flynn	Liv - Uninc	4	4.56	8	04	56.4	B	56.2	B
33	I-580 - WB	N Flynn	Greenville Rd	Liv - Uninc	4	2.34	8	04	54.8	C	56.9	B
34	I-580 - WB	Greenville Rd	1st St	Liv - Uninc	4	2.30	8	04,08	24.0	**F(30)**	28.9	**F(30)**
35	I-580 - WB	1st St	Portola Ave	Liv	4	2.52	8	08	16.8	**(F20)**	29.4	**F(30)**
36	I-580 - WB	Portola	SR 84/Airway Blvd	Liv - Plea	4	1.76	8	04,08	29.4	**F(30)**	42.4	D
37	I-580 - WB	SR 84/Airway Blvd	Fallon Rd/El Charro	Plea	4	1.78	8	04,08	40.9	E	46.9	D
38	I-580 - WB	Fallon Rd/El Charro	Tassajara	Plea	4	1.16	8	04,08	52.8	C	55.4	B
39	I-580 - WB	Tassajara Rd	I-680	Plea	4	2.87	8		54.3	C	62.9	A
40	I-580 - WB	I-680	San Ramon Rd	Plea - Uninc	4	0.69	8		64.2	A	62.8	A

2010 LOS Monitoring Study Results for Freeways - AM Peak Period

	CMP Route	Segment Limits From	To	Jurisdiction	Plan Area	Length (miles)	No of Lanes Lanes	Prior LOS F (Years)	2008 LOS results Speed	LOS	2010 LOS results Speed	LOS
41	I-580 - WB	San Ramon Rd	Eden Caynon	Plea - Uninc	4	4.75	8		62.5	A	65.4	A
42	I-580 - WB	Eden Canyon	Center St	Plea - Uninc	4	2.28	8		49.8	C	68.9	A
43	I-580 - WB	Center	I-580/238	Unincorp	2	1.94	8	02	31.9	E	50.5	C
44	I-580 - EB	I-80	I-980	Oak	1	1.24	8		63.0	A	49.8	C
45	I-580 - EB	I-980	Harrison	Oak	1	0.95	8		60.0	A	95.9	A
46	I-580 - EB	Harrison	Lakeshore	Oak	1	0.69	8		61.4	A	63.2	A
47	I-580 - EB	Lakeshore	Coolidge	Oak	1	2.25	8		65.2	A	66.0	A
48	I-580 - EB	Coolidge	SH 13 Off	Oak	1	2.15	8		57.3	B	68.3	A
49	I-580 - EB	SH 13 Off	MacArthur	Foothill	1	4.09	8		65.5	A	65.6	A
50	I-580 - EB	MacArthur	I-580/238	SL - Hay	2	4.33	8		67.2	A	66.5	A
51	I-580 - WB	I-238	Foothill/MacArthur	Oak -SL	2	4.42	8		70.9	A	63.0	A
52	I-580 - WB	Foothill/MacArthur	SH 13 Off	Oak -SL	1	3.89	8		40.6	E	36.2	E
53	I-580 - WB	SH 13 Off	Fruitvale	Oak	1	2.36	8	08	25.0	(F30)	21.9	(F30)
54	I-580 - WB	Fruitvale	Harrison	Oak	1	2.21	8		32.0	E	33.7	E
55	I-580 - WB	Harrison	SH 24 On-ramp	Oak	1	1.16	8		48.7	D	37.4	E
56	I-580 - WB	SH-24 On-ramp	I-80/580 Split	Oak	1	0.69	8	02,06-08	20.7	(F30)	13.7	(F20)
57	I-580 - EB	Central	I-80 Jct	Alb	1	0.77	4		31.9	E	32.2	E
58	I-580 - WB	I-80 Jct	Central	Alb	1	1.07	4		68.1	A	64.1	A
59	I-680 - NB	Scott Creek Rd	Rt 262/Mission	Fre	3	2.20	6		62.6	A	71.2	A
60	I-680 - NB	Rt 262/Mission	Durham Rd	Fre	3	1.34	6		66.7	A	69.2	A
61	I-680 - NB	Durham Rd	Washington Blvd	Fre	3	1.54	6		65.1	A	65.6	A
62	I-680 - NB	Washington Blvd	Rt 238/Mission	Fre	3	0.89	6		68.8	A	69.7	A
63	I-680 NB	SR 238/Mission	Vargas Rd	Unincorp	3	0.82	6		61.7	A	62.6	A
64	I-680 NB	Vargas Rd	Andrade Rd	Unincorp	3	2.64	6		64.1	A	66.0	A
65	I-680 NB	Andrade Rd	Calaveras	Unincorp	3	1.13	6		61.1	A	65.8	A
66	I-680 NB	Calaveras	Rt.84/Vallecitos	Unincorp	3	0.30	6		69.8	A	74.8	A
67	I-680 NB	SR 84	Sunol Blvd	Plea - Uninc	4	3.45	6		66.4	A	68.8	A
68	I-680 NB	Sunol Blvd.	Bernal Ave	Plea - Uninc	4	1.52	6		64.9	A	66.2	A
69	I-680 NB	Bernal Ave	Stoneridge Dr	Plea	4	2.39	6		65.1	A	66.5	A
70	I-680 NB	Stoneridge Dr	I-580	Plea	4	0.84	6		67.0	A	70.6	A
71	I-680 - NB	I-580	Alcosta	Dub	4	1.83	6		58.4	B	60.6	A
72	I-680 - SB	Alcosta	I-580	Dub	4	1.84	6		67.4	A	68.3	A
73	I-680 SB	I-580	Stoneridge Dr	Plea	4	0.76	6		59.1	B	60.2	A
74	I-680 SB	Stoneridge Dr	Bernal	Plea	4	2.55	6		62.4	A	53.8	C
75	I-680 SB	Bernal Ave.	Sunol Blvd	Unincorp	4	1.31	6		41.3	D	35.7	E
76	I-680 SB	Sunol Blvd.	SR 84	Unincorp	4	3.82	6		51.0	C	35.9	E
77	I-680 SB	SR 84 (Niles Canyon)	Andrade Rd	Unincorp	3	1.32	6	97-02	46.9	D	48.4	D
78	I-680 SB	Andrade Rd	Sheridon Rd	Unincorp	3	1.39	6	97-02	55.7	B	50.7	C
79	I-680 SB	Sheridon Rd	Vargas Rd	Unincorp	3	0.81	6	97-02	41.6	D	60.3	A
80	I-680 SB	Vargas Rd	SR 238/Mission	Unincorp	3	1.08	6	97-02	38.1	E	52.8	C

2010 LOS Monitoring Study Results for Freeways - AM Peak Period

	CMP Route	Segment Limits From	To	Jurisdiction	Plan Area	Length (miles)	No of Lanes	Prior LOS F (Years)	2008 LOS results Speed	2008 LOS results LOS	2010 LOS results Speed	2010 LOS results LOS
81	I-680 - SB	Rt 238/Mission	Washington Blvd	Fre	3	1.04	6	02	41.9	D	54.6	C
82	I-680 - SB	Washington Blvd	Durham Rd	Fre	3	1.52	6	02	41.1	D	61.3	A
83	I-680 - SB	Durham Rd	Rt 2262/Mission	Fre	3	1.67	6	02	45.5	D	63.1	A
84	I-680 - SB	Rt 262/Mission	Scott Creek Rd	Fre	3	2.19	6	02	53.9	C	59.9	B
85	I-880 - NB	Dix Landing	SR 262/Mission	Fre	3	2.08	8		44.7	D	71.4	A
86	I-880 - NB	SR262/Mission	AutoMall Pkwy	Fre	3	2.44	8		58.5	B	67.9	A
87	I-880 - NB	AutoMall Pkwy	Stevenson	Fre	3	1.54	8		58.5	B	67.8	A
88	I-880 - NB	Stevenson	Decoto	Fre	3	4.04	8		62.7	A	65.1	A
89	I-880 - NB	Decota	Alvarado Blvd	Fre - Un Cty	3	1.17	8		51.3	C	54.3	C
90	I-880 - NB	Alcarado Blvd	Alvarado-Niles Blvd	Fre- Uni Cty	3	1.17	8		42.8	D	33.8	E
91	I-880 - NB	Alv-Niles	Tennyson	Un Cty - Hay	3	2.65	8	06-08	26.2	(F30)	22.7	(F30)
92	I-880 - NB	Tennyson	SR 92	Hay	2	1.14	8		45.3	D	44.6	D
93	I-880 - NB	SR 92	A St	Hay	2	1.52	8		52.9	C	53.1	C
94	I-880 - NB	A St	I-238 (Marina before 06)	Unincorp	2	1.82	8		59.0	B	61.9	A
95	I-880 - NB	I-880/I238 (split)	Marina Blvd	Oak -SL	2	2.66	8		53.8	C	40.6	E
96	I-880 - NB	Marina Blvd	SR 112/Davis	Oak - SL	2	0.79	8		47.2	D	25.0	(F30)
97	I-880 - NB	SR 112/Davis	Hegenberger	Oak - SL	2	1.88	8		44.6	D	34.7	E
98	I-880 - NB	Hegenberger	High/42nd	Oak	1	2.47	8		47.1	D	26.1	(F30)
99	I-880 - NB	High/42nd	23rd (1st on)	Oak	1	1.06	8		38.9	E	24.9	(F30)
100	I-880 - NB	23RD (1ST on)	Jct 980 (off)	Oak	1	2.64	8		45.7	D	41.1	D
101	I-880 - NB	Jct 980 (off)	I-880/I-80 split	Oak	1	2.38	8		63.3	A	61.8	A
102	I-880 - NB	I-880/I238 (split)	I-880/I-80 (merge)	Oak	1	1.40	8		64.3	A	64.1	A
103	I-880 - SB	I-880/I-80 split	I-880/I-80 merge	Oak	1	1.63	8		65.5	A	67.5	A
104	I-880 - SB	I-880/I-80 merge	Jct 980	Oak	1	2.65	8		81.7	A	49.2	C
105	I-880 - SB	I-980	23rd	Oak	1	2.79	8		57.4	B	47.0	D
106	I-880 - SB	23rd St	High/42nd	Oak	1	1.35	8		76.7	A	78.9	A
107	I-880 - SB	High/42nd	Hegenberger	Oak	1	2.27	8		61.8	A	61.5	A
108	I-880 - SB	Hegenberger	SR 112/Davis	Oak - SL	1	1.69	8		47.9	D	57.3	B
109	I-880 - SB	SR 112/Davis	Marina Blvd	Oak - SL	1	0.87	8		44.0	D	69.2	A
110	I-880 - SB	Marina Blvd	SR 238 WB (merge)	Oak - SL	1	2.41	8		33.9	E	42.2	D
111	I-880 - SB	I-238 (Marina before 06)	A St	SL-Uninc	2	2.03	8	06-08	24.1	(F30)	19.0	(F20)
112	I-880 - SB	A St	Rt 92	Hay	2	1.81	8	97,98,00-02,08	29.4	(F30)	25.1	(F30)
113	I-880 - SB	Rt 92	Tennyson	Hay	2	0.96	8		30.3	E	35.4	E
114	I-880 - SB	Tennyson	Alv-Niles	Hay - UC	2	2.49	8	00	38.8	E	32.7	E
	I-880 - SB	Alvarado-Niles	Alvarado	UC - Fre	2	1.37	8		45.6	D	32.7	(F30)
116	I-880 - SB	Alvarado	Decoto	UC - Fre	2	1.17	8		45.4	D	36.0	E
117	I-880 - SB	Decoto	Stevenson	Fre	3	4.07	8		47.4	D	32.9	(F30)
118	I-880 - SB	Stevenson	AutoMall Pkwy	Fre	2	1.26	8	04,06	40.5	E	47.5	D
119	I-880 - SB	AutoMall Pkwy	Rt 262/Mission	Fre	2	3.04	8	04-08	22.0	(F30)	54.3	C

2010 LOS Monitoring Study Results for Freeways - AM Peak Period

	CMP Route	Segment Limits From	Segment Limits To	Jurisdiction	Plan Area	Length (miles)	No of Lanes Lanes	Prior LOS F (Years)	2008 LOS results Speed	2008 LOS results LOS	2010 LOS results Speed	2010 LOS results LOS
120	I-880 - SB	SR 262/Mission	Dix Landing(off)	Fre	3	1.27	8	96-00,04	57.1	B	56.7	B
121	I-980 - WB	SR 24 @ 580	I-880	Oak	1	2.27	8		58.0	B	61.6	A
122	I-980 - EB	I-880	SR 24 @ 580	Oak	1	2.32	8		61.4	A	61.5	A
123	SR 13 - NB	Mountain On	Carson/Redwood (1) (off)	Oak	1	1.20	4		82.5	A	91.9	A
124	SR 13 - NB	Carson/Redwood (1) (off)	Joaguin Miller	Oak	1	1.09	4		41.2	D	45.2	D
125	SR 13 - NB	Joa Miller/Linc	Moraga Ave	Oak	1	1.77	4		51.9	C	33.3	E
126	SR 13 - NB	Moraga Ave	Hiller (Sig)	Oak	1	1.57	4	06	34.4	E	28.8	(F30)
127	SR 13 - SB	Hiller Sig	Moraga Ave	Oak	1	1.66	4		56.9	B	58.6	B
128	SR 13 - SB	Moraga Ave	Joa Miller/Linc	Oak	1	2.04	4		73.2	A	71.9	A
129	SR 13 - SB	Joaq Miller/Lincoln	Redwood	Oak	1	1.34	4		63.3	A	61.4	A
130	SR 13 - SB	Redwood	Jct I-580 (EB Merge)	Oak	1	0.89	4		50.3	C	48.3	D
131	SR 24 - EB	Jct I-580 (on)	Broadway/SR 13	Oak	1	2.08	8	02,06	64.5	A	65.4	A
132	SR 24 - EB	Broadway/SR 13	Caldecott (enter)	Oak	1	1.41	8	02,06,08	15.2	(F20)	17.3	(F20)
133	SR 24 - EB	Caldecott (enter)	Fish Ranch Road	Oak	1	1.03	8	02,06	39.8	E	38.7	E
134	SR 24 - WB	Fisch Ranch Road (CC)	Caldecott (exit)	Oak	1	0.99	8		51.0	C	49.4	C
135	SR 24 - WB	Caldecott (exit)	Broadway	Oak	1	1.77	8		49.8	C	64.3	A
136	SR 24 - WB	Broadway	Jct I-580 (on)	Oak	1	2.19	8		37.0	E	50.2	C
137	SR 84 - EB	San M CL	Toll Plaza	Fremont	3	2.97	6		57.6	B	55.0	C
138	SR 84 - EB	Toll Plaza	Thornton	Fremont	3	0.27	6		57.2	B	57.7	B
139	SR 84 - EB	Thornton Ave/Pascon Padre	Newark Blvd/Ardenwood Blvd	Newark	3	1.23	6		65.1	A	64.8	A
140	SR 84 - EB	Newark Blvd/Ardenwood Blvd	I-880 NB (off)	Newark	3	0.97	6		37.2	E	39.9	E
141	SR 84 - WB	I-880 NB (off)	Ardenwood/Newark	Newark	3	0.99	6	02	40.8	E	46.5	D
142	SR 84 - WB	Ardenwood/Newark	Paseo Padre Pkwy	Newark	3	1.15	6	02	58.8	B	35.6	E
143	SR 84 - WB	Paseo Padre Pkwy	Toll Gate	Newark	3	0.75	6	02	41.9	D	22.1	(F30)
144	SR 84 - WB	Toll Plaza	San M CL	Fremont	2	3.17	6		63.0	A	65.1	A
145	SR 92 - EB	San M CL	Toll Plaza	Uninc - Hay	2	2.61	6		69.3	A	64.6	A
146	SR 92 - EB	Toll Plaza	Clawiter	Uninc - Hay	2	1.76	6		64.7	A	60.2	A
147	SR 92 - EB	Clawiter	I-880	Hay	2	2.10	6		60.7	A	55.9	B
148	SR 92 - WB	I-880	Clawiter	Hay	2	2.01	6	02	53.1	C	51.0	C
149	SR 92 - WB	Clawiter	Toll Plaza	Uninc - Hay	2	1.87	6	02	42.6	D	42.9	D
150	SR 92 - WB	Toll Plaza	San M CL	Uninc - Hay	2	2.61	6	02	61.5	A	61.9	A

2010 LOS Monitoring Study Preliminary Results for Arterials - AM Peak Period

#	CMP Route	Segment Limits From	To	Jurisdiction	Length (miles)	Arterial	Plan Area	No of Lanes	2008 LOS Results Speed	2008 LOS Results LOS	2010 LOS Results Speed	2010 LOS Results LOS
1	150th St - EB	Hesperian	I-580	SL	0.49	II	2	2	16.7	D	18.5	C
2	150th St - WB	I-580	Hesperian	SL	0.49	II	2	2	14.5	D	14.9	D
3	A Street - EB	I-880	Western	Hay	1.08	II	2	2	23.2	C	21.7	C
4	A Street - EB	Western	SR 238	Hay	0.53	III	2	2	12.0	D	10.3	D
5	A Street - WB	SR 238	Western	Hay	0.53	III	2	2	12.8	D	14.0	C
6	A Street - WB	Western	I-880	Hay	1.08	II	2	2	19.8	C	25.6	B
7	Atlantic - EB	Main	Webster	Ala	0.80	II	1	2	18.9	C	21.4	C
8	Atlantic - WB	Webster	Main	Ala	0.80	II	1	2	24.2	B	24.1	B
9	Hegenberger - EB	SR 61	Edgewater	Oak	0.76	I			29.4	B	22.8	C
10	Hegenberger - EB	Edgewater	Baldwin	Oak	0.73	I	1	3	24.4	C	24.8	C
11	Hegenberger - EB	Baldwin	E 14th	Oak	1.03	I	1	3	30.7	B	29.3	B
12	Hegenberger - WB	E 14th	Baldwin	Oak	1.03	I	1	3	46.8	A	39.6	A
13	Hegenberger - WB	Baldwin	Edgewater	Oak	0.73	I	1	3	23.0	C	25.4	C
14	Hegenberger - WB	Edgewater	SR 61	Oak	0.76	I	1	3	20.3	D	21.5	D
15	Hesperian - NB	Tennyson	SH 92 - WB	Hay	0.47	I	2	3	18.5	D	15.7	E
16	Hesperian - NB	SH 92	La Playa	Hay	0.79	II	2	3	18.9	C	25.9	B
17	Hesperian - NB	La Playa	W.Winton Ave.	Hay	0.44	II	2	3	11.5	E	25.8	B
18	Hesperian - NB	W.Winton Ave	A St	Hay	0.96	II	2	3	23.8	C	26.4	B
19	Hesperian - NB	A St	Hacienda	Unin	0.65	II	2	2	23.6	C	24.3	C
20	Hesperian - NB	Hacienda	Grant	Unin	0.65	II	2	2	26.8	B	26.9	B
21	Hesperian - NB	Grant	Llewelling	Unin	0.28	II	2	2	11.8	E	10.0	(F)
22	Hesperian - NB	Llewelling	Springlake	Unin	0.40	II	2	2	28.7	B	30.5	B
23	Hesperian - NB	Springlake	Fairmont	SL	0.66	II	2	2	19.1	C	18.5	C
24	Hesperian - NB	Fairmont	14th	SL	0.32	II	2	2	18.0	D	17.3	D
25	Hesperian - SB	14th	Fairmont	SL	0.31	II	2	2	9.7	(F)	12.9	E
26	Hesperian - SB	Fairmont	Springlake	SL	0.65	II	2	2	19.2	C	27.0	B
27	Hesperian - SB	Springlake	Llewelling	Unin	0.40	II	2	2	17.2	D	14.3	D
28	Hesperian - SB	Llewelling	Grant	Unin	0.28	II	2	2	14.1	D	14.5	D
29	Hesperian - SB	Grant	Hacienda	Unin	0.65	II	2	2	27.9	B	21.6	C
30	Hesperian - SB	Hacienda	A St	Unin	0.65	II	2	2	20.8	C	20.8	C
31	Hesperian - SB	A St	W.Winton Ave.	Hay	0.96	II	2	3	21.1	C	15.5	D
32	Hesperian - SB	W.Winton Ave	La Playa	Hay	0.44	II	2	3	25.5	B	25.8	B
33	Hesperian - SB	La Playa	SH 92	Hay	0.79	II	2	3	21.0	C	17.2	C
34	Hesperian - SB	SH 92 - WB	Tennyson	Hay	0.47	I	2	3	15.6	E	16.2	D
35	Mowry - EB	I-880	Farwell	Fre	0.34	II	3	2	15.0	D	17.6	D
36	Mowry - EB	Farwell	SH 84	Fre	2.63	II	3	2	20.8	C	29.4	B
37	Mowry - WB	SH 84	Farwell	Fre	2.63	II	3	2	23.0	C	24.9	B
38	Mowry - WB	Farwell	I-880	Fre	0.34	II	3	2	20.6	C	24.0	B

2010 LOS Monitoring Study Preliminary Results for Arterials - AM Peak Period

#	CMP Route	Segment Limits From	To	Jurisdiction	Length (miles)	Arterial	Plan Area	No of Lanes	2008 LOS Results Speed	2008 LOS Results LOS	2010 LOS Results Speed	2010 LOS Results LOS
39	Park/23rd - EB	Encinal	Santa Clara	Ala	0.23	III	1	2	15.4	C	13.2	C
40	Park/23rd - EB	Santa Clara	Kennedy	Ala	0.66	III	1	2	15.5	C	11.9	D
41	Park/23rd - EB	Kennedy	E 11th	Ala - Oak	0.49	II	1	2	17.8	D	17.2	D
42	Park/23rd - WB	E 11th	Kennedy	Ala - Oak	0.45	II	1	2	31.9	A	23.7	C
43	Park/23rd - WB	Kennedy	Santa Clara	Ala	0.66	III	1	2	16.6	C	13.1	C
44	Park/23rd - WB	Santa Clara	Encinal	Ala	0.23	III	1	2	12.0	D	22.0	B
45	MLK Jr Way - NB	SH 24	Adeline	Oak	0.90	II	1	2	21.4	C	24.9	B
46	Adeline - NB	MLK Jr - South	MLK Jr - North	Berk	0.30	II	1	2	15.1	D	18.6	C
47	Adeline - NB	MLK Jr - North	Shattuck	Berk	0.63	II	1	2	29.4	B	17.7	D
48	Shattuck NB	Shattuck	Dwight	Berk	0.32	II	1	2	17.1	D	23.7	C
49	Shattuck NB	Dwight	University	Berk	0.63	III	1	2	20.5	B	24.2	B
50	Shattuck SB	University	Dwight	Berk	0.63	III	1	2	16.2	C	17.9	C
51	Shattuck SB	Dwight	Shattuck	Berk	0.32	II	1	2	29.5	B	30.1	A
52	Adeline - SB	Shattuck	MLK Jr - North	Berk	0.63	II	1	2	17.9	D	18.6	C
53	Adeline - SB	MLK Jr - North	MLK Jr - South	Berk	0.30	II	1	2	13.8	E	15.6	D
54	MLK Jr Way - SB	Adeline	SH 24	Oak	0.88	II	1	2	17.1	D	21.8	C
55	Tennyson - EB	Hesperian	I-880	Hay	0.88	I	2	2	21.7	D	21.0	D
56	Tennyson - EB	I-880 NB	Rt 238	Hay	1.55	II	2	2	21.7	C	20.7	C
57	Tennyson - WB	Rt 238	I-880	Hay	1.63	II	2	2	19.2	C	17.5	D
58	Tennyson - WB	I-880	Hesperian	Hay	0.85	I	2	2	17.2	D	16.0	E
59	University - EB	I-80 SB	6th	Berk	0.40	II	1	2	20.7	C	25.3	B
60	University - EB	6th	San Pablo	Berk	0.31	II	1	2	17.3	D	20.2	C
61	University - EB	San Pablo	Sacramento	Berk	0.56	II	1	2	19.1	C	12.7	E
62	University - EB	Sacramento	ML King	Berk	0.48	II	1	2	20.5	C	16.0	D
63	University - EB	ML King	Shattck Pl	Berk	0.30	III	1	2	15.6	C	25.6	A
64	University - WB	Shattck Pl	ML King	Berk	0.30	III	1	2	26.1	A	17.3	C
65	University - WB	ML King	Sacramento	Berk	0.48	II	1	2	20.9	C	20.9	C
66	University - WB	Sacramento	San Pablo	Berk	0.56	II	1	2	18.8	C	19.4	C
67	University - WB	San Pablo	6th	Berk	0.31	II	1	2	20.0	C	15.4	D
68	University - WB	6th	I-80 SB	Berk	0.40	II	1	2	41.7	A	37.3	A
69	SR 13 Ashby - WB	Hiller	Domingo	Oak - Berk	0.79	II	1	2	18.5	C	20.8	C
70	SR 13 Ashby - WB	Domingo	College	Berk	0.50	III	1	1	18.8	C	15.0	C
71	SR 13 Ashby - WB	College	Telegraph	Berk	0.38	III	1	1	13.8	C	20.4	B
72	SR 13 Ashby - WB	Telegraph	Shattuck	Berk	0.38	III	1	1	17.4	C	20.1	B
73	SR 13 Ashby - WB	Shattuck	ML King	Berk	0.24	III	1	1	11.8	D	10.3	D
74	SR 13 Ashby - WB	ML King	San Pablo	Berk	0.87	III	1	1	16.5	C	18.0	C
75	SR 13 Ashby - WB	San Pablo	I-80 Ramps	Berk	0.64	II	1	2	17.2	D	19.1	C
76	SR 13 Ashby - EB	I-80	San Pablo	Berk	0.61	II	1	2	18.2	C	19.7	C
77	SR 13 Ashby - EB	San Pablo	ML King	Berk	0.87	III	1	1	19.5	B	19.7	B
78	SR 13 Ashby - EB	ML King	Shattuck	Berk	0.24	III	1	1	10.7	D	12.6	D
79	SR 13 Ashby - EB	Shattuck	Telegraph	Berk	0.38	III	1	1	16.4	C	21.4	B
80	SR 13 Ashby - EB	Telegraph	College	Berk	0.38	III	1	1	16.8	C	18.8	C
81	SR 13 Ashby - EB	College	Domingo	Berk	0.50	III	1	1	21.5	B	19.7	B
82	SR 13 Ashby - EB	Domingo	Hiller	Berk - Oak	0.79	II	1	2	30.0	B	28.7	B

2010 LOS Monitoring Study Preliminary Results for Arterials - AM Peak Period

#	CMP Route	Segment Limits From	To	Jurisdiction	Length (miles)	Arterial	Plan Area	No of Lanes	2008 LOS Results Speed	2008 LOS Results LOS	2010 LOS Results Speed	2010 LOS Results LOS
83	SR 61 - SB	Atlantic	Cent/Webster	Ala	0.55	III	1	2	16.4	C	16.5	C
84	SR 61 - SB	Cent/Webster	Sher/Encino	Ala	0.73	II	1	2	22.5	C	20.8	C
85	SR 61 - SB	Sher/Encino	Park	Ala	1.22	II	1	1	20.7	C	21.4	C
86	SR 61 - SB	Park	High/Otis	Ala	1.06	II	1	1	24.2	B	23.4	C
87	SR 61 (Doolittle) - SB	High	Island Dr	Ala	0.41	II	1	2	13.6	E	16.4	D
88	SR 61 (Doolittle) - SB	Island Dr	Harbor Bay	Ala	0.50	I	1	2	36.2	A	30.4	B
89	SR 61 - SB	Harbor Bay	Airport Dr	Oak	2.15	I	1	1	48.2	A	35.5	A
90	SR 61 (Doolittle) - SB	Airport	Davis	Oak - SL	0.95	I	1	2	28.3	B	40.6	A
91	SR 61 (Doolittle) - NB	Davis	Airport	SL - Oak	0.95	I	2	2	23.5	C	32.8	B
92	SR 61 - NB	Airport Dr	Harbor Bay	Ala	2.15	I	1	1	52.3	A	40.8	A
93	SR 61 (Doolittle) - NB	Harbor Bay	Island Dr	Ala	0.50	I	1	2	29.7	B	31.0	A
94	SR 61 (Doolittle) - NB	Island Dr	High/Otis	Ala	0.41	II	1	2	16.9	D	21.6	C
95	SR 61 - NB	High/Otis	Park	Ala	1.06	II	1	1	23.1	C	24.0	C
96	SR 61 - NB	Park/Encnal	Sher/Cent	Ala	1.22	II	1	1	18.5	C	20.5	C
97	SR 61 - NB	Sher/Cent	Web/Cent	Ala	0.73	II	1	2	22.5	C	23.0	C
98	SR 61 - NB	Cent/Web	Atlantic	Ala	0.55	III	1	2	14.2	C	11.6	D
99	SR 77 (42nd) - EB	I-880 NB	E 14th	Oak	0.32	I	1	2	33.5	B	29.9	B
100	SR 77 (42nd) - WB	E 14 th	I-880 NB	Oak	0.30	I	1	2	37.1	A	32.7	B
101	Decoto - WB	SH 238/Mission	Union Square	UC	0.85	II	3	2	22.2	C	16.5	D
102	Decoto - WB	Union Square	Alv-Niles Rd	UC	0.25	II	3	2	16.6	D	17.1	C
103	Decoto - WB	Alv-Niles Rd	Fremont CL	UC	0.66	II	3	2	20.4	C	24.9	B
104	Decoto - WB	Fremont CL	I-880 NB (off)	Fre	1.15	II	3	2	13.6	E	15.2	D
105	Decoto - EB	I-880 NB (off)	Union City CL	Fre	1.15	II	3	2	26.7	B	24.5	B
106	Decoto - EB	Union City CL	Alv-Niles Rd	UC	0.66	II	3	2	13.0	E	17.7	D
107	Decoto - EB	Alv-Niles Rd	Union Square	UC	0.25	II	3	2	22.1	C	17.1	D
108	Decoto - EB	Union Square	SH 238/Mission	UC	0.85	II	3	2	19.9	C	18.2	C
109	SR 84/Mowry (Fre)-WB	SH 238	Peralta	Fre	0.78	I	3		30.3	B	31.9	B
110	SR 84/Peralta (Fre)-WB	Mowry	Fremont	Fre	1.66	I	3		26.9	C	28.0	C
111	SR 84/Fremont(Fre)-WB	Peralta	Thornton	Fre	0.33	II	3		10.6	E	9.8	(F)
112	SR 84/Thornton(Fre)-WB	Fremont	I-880 SB	Fre	1.29	II	3		22.1	C	23.6	C
113	SR 84/Thornton (Fre)-EB	I-880 SB	Fremont	Fre	1.29	II	3	4	26.9	B	22.5	C
114	SR 84/Fremont (Fre)-EB	Thornton	Peralta	Fre	0.32	II	3	4	14.7	D	11.4	E
115	SR 84/Peralta (Fre) - EB	Fremont	Mowry	Fre	1.64	I	3	2	25.0	C	28.8	B
116	SR 84/Mowry (Fre) - EB	Peralta	SH 238	Fre	0.87	I	3	4(2)	25.5	C	23.0	C
117	1st Street - SB	I-580 Off	N Mines	Liv	0.61	I			24.6	C	21.3	D
118	1st Street - SB	N Mines	Inman	Liv	1.05	I			28.6	B	39.4	A
119	1st Street - NB	Inman	N Mines	Liv	1.05	I			32.7	B	34.8	B
120	1st Street - NB	N Mines	I-580 Off	Liv	0.61	I			27.1	C	29.6	B

2010 LOS Monitoring Study Preliminary Results for Arterials - AM Peak Period

#	CMP Route	Segment Limits From	To	Jurisdiction	Length (miles)	Arterial	Plan Area	No of Lanes	2008 LOS Results Speed	2008 LOS Results LOS	2010 LOS Results Speed	2010 LOS Results LOS
121	SR 84 - EB	SR 238/Mission	Union City Limit	Fre	1.59	41.9	3	2	38.5	A	40.5	A
122	SR 84 - EB	Union City Limit	Palamores	Fre	0.94	44.5	3	2	39.5	A	43.2	A
123	SR 84 - EB	Palamoras	Niles Cnyn Quarry	Fre	2.16	43.8	3	2	40.5	A	43.2	A
124	SR 84 - EB	Niles Cnyn Quarry	Sunol Rd	Fre	1.75	46.7	3	2	42.2	A	47.3	A
125	SR 84 - EB	Sunol Rd	Plea-Sunol Rd	Fre	0.53	27.6	3	2	5.5	(F)	19.2	D
126	SR 84 - EB	Ple-Sunol Rd	SR 84 (Off)/I-680	Unin	0.77	42.9	4	2	39.3	C	40.9	A
127	SR 84 - EB	SR 84 (Off)/I-680	Vallecitos Ln	Unin	1.07	50.8	4	2	54.2*	A*	44.9	B
128	SR 84 - EB	Vallecitos Ln	Vallecitos Nuc.Cntr	Unin	1.14	57.5	4	2			56.9	A
129	SR 84 - EB	Vallecitos Nuc Center E	Culvert (Lat/Long: 37	Unin	1.65	58.3	4	2			57.4	A
130	SR 84 - EB	Culvert (Lat/Long: 37.6	Ruby Hill /Kaithoff	Unin	1.62	59.2	4	2	33.7*	D*	57.4	A
131	SR 84 - EB	Ruby Hill./Kaithoff	Isabel/Vallecitos	Unin	0.38	I	4	2			37.2	A
132	SR 84 (Liv) - NB	Vallecitos/Isabel	Vineyard	Liv	1.12	I	4	2	40.6	A	44.6	A
133	SR 84 (Liv) - NB	Vineyard	Concannon	Liv	0.60	I	4	2	36.1*	A*	43.0	A
134	SR 84 (Liv) - NB	Concannon	Stanley	Liv	1.07	I	4	2			40.3	A
135	SR 84 (Liv) - NB	Stanley	W. Jack London Blvd	Liv	0.88	I	4	2	33.2*	B*	41.2	A
136	SR 84 (Liv) - NB	W. Jack London Blvd.	Airway/Kitty Hawk	Liv	0.49	I	4	2			19.5	D
137	SR 84 (Liv) - NB	Airway/Kitty	I-580	Liv	1.06	I	4	2	23.7	C	26.6	C
138	SR 84 (Liv) - SB	I-580	Airway/Kitty Hawk	Liv	1.06	I	4	2	32.9	B	28.7	B
139	SR 84 (Liv) - SB	Airway/Kitty	W. Jack London Blvd	Liv	0.49	I	4	2	48*	A*	36.7	A
140	SR 84 (Liv) - SB	W. Jack London Blvd.	Stanley	Liv	0.90	I	4	2			48.0	A
141	SR 84 (Liv) - SB	Stanley	Concannon	Liv	1.05	I	4	2	35.5*	A*	40.5	A
142	SR 84 (Liv) - SB	Concannon	Vineyard	Liv	0.60	I	4	2			22.8	C
143	SR 84 (Liv) - SB	Vineyard	Isabel/Vallecitos	Liv	1.12	I	4	2	19.9	D	18.9	D
144	SR 84 - WB	Isabel/Vallecitos	Ruby Hill /Kaithoff	Liv	0.38	I	4	2	35.4*	C*	39.7	A
145	SR 84 - WB	Ruby Hill /Kaithoff	Culvert (Lat/Long: 37	Pleas	1.62	55.8	4	2			47.4	B
146	SR 84 - WB	Culvert (Lat/Long: 37.6	Vallecitos Nuc.Cntr	Unin	1.65	56.5	4	2			45.4	B
147	SR 84 - WB	Vallecitos Nuc.Cntr	Vallecitos Ln	Unin	1.14	52.5	3	2	40.9*	C*	52.0	A
148	SR 84 - WB	Vallecitos Ln	SR 84/I-680 NB Off	Unin	0.21	55.3	3	2			57.1	A
149	SR 84 - WB	SR 84/I-680 NB Off	Ple-Sunol Rd	Fre	1.27	41.4	3	2			38.0	B
150	SR 84 - WB	Ple-Sunol Rd	Sunol Rd	Fre	0.53	41.9	3	2	40.9	C	41.9	A
151	SR 84 - WB	Sunol Rd	Niles Canyon Quarry	Fre	1.75	48.5	3	2	36.3	B	46.9	A
152	SR 84 - WB	Niles Canyon Quarry	Fremont City Limit	Fre	1.00	47.5	3	2	48.3	A	45.4	A
153	SR 84 - WB	Fremont City Limit	Union City Limit	Fre	2.10	41.8	3	2	43.4	A	42.5	A
154	SR 84 - WB	Union City Limit	SR 238	Fre	1.62	31.7	3	2	28.8	D	28.4	B
155	SR 92 - EB	I-880	Mission	Hay	1.59	II	2	3	21.5	C	18.4	C
156	SR 92 - WB	Mission	I-880	Hay	1.59	II	2	3	11.2	E	16.6	D
157	SR 112 (Davis) - EB	Doolittle	I-880	SL	0.51	II	2	2	26.2	B	31.2	A
158	SR 112 (Davis) - EB	I-880	San Leandro	SL	1.01	II	2	2	23.6	C	24.5	B
159	SR 112 (Davis) - EB	San Leandro	14th	SL	0.28	III	2	2	13.9	C	14.5	C
160	SR 112 (Davis) - WB	E 14th	San Leandro	SL	0.28	III	2	2	14.3	C	14.0	C
161	SR 112 (Davis) - WB	San Leandro	I-880	SL	1.00	II	2	2	27.7	B	29.0	B
162	SR 112 (Davis) - WB	I-880	Doolittle	SL	0.51	II	2	2	20.2	C	21.5	C

2010 LOS Monitoring Study Preliminary Results for Arterials - AM Peak Period

#	CMP Route	Segment Limits From	To	Jurisdiction	Length (miles)	Arterial	Plan Area	No of Lanes	2008 LOS Results Speed	2008 LOS Results LOS	2010 LOS Results Speed	2010 LOS Results LOS
163	SR 123 San Pablo - SB	Carlson	Washington	Alb	0.53	II	1	2	26.7	B	30.4	B
164	SR 123 San Pablo - SB	Washington	Marin	Alb	0.44	III	1	2	17.5	C	19.6	C
165	SR 123 San Pablo - SB	Marin	Gilman	Alb - Berk	0.47	II	1	2	26.8	B	24.2	C
166	SR 123 San Pablo - SB	Gilman	University	Berk	0.86	II	1	2	22.4	C	18.7	D
167	SR 123 San Pablo - SB	University	Allston	Berk	0.20	III	1	2	25.9	A	23.2	B
168	SR 123 San Pablo - SB	Allston	Dwight	Berk	0.4	II	1	2	21.7	C	25.0	B
169	SR 123 San Pablo - SB	Dwight	Ashby	Berk	0.68	II	1	2	26.2	B	27.6	B
170	SR 123 San Pablo - SB	Ashby	Stanford	Berk	0.81	II	1	2	19.5	C	23.1	C
171	SR 123 San Pablo - SB	Stanford	53rd	Oak	0.27	II	1	2	23.1	C	25.8	B
172	SR 123 San Pablo - SB	53rd	Park	Emer	0.34	II	1	2	20.6	C	24.9	C
173	SR 123 San Pablo - SB	Park	35th	Emer - Oak	0.45	II	1	2	19.3	C	21.4	C
174	SR 123 San Pablo - NB	35th	Park	Oak - Emer	0.45	II	1	2	17.5	D	20.9	C
175	SR 123 San Pablo - NB	Park	53rd	Emer	0.34	II	1	2	26.6	B	24.0	B
176	SR 123 San Pablo - NB	53rd	Stanford	Oak	0.27	II	1	2	21.3	C	27.9	B
177	SR 123 San Pablo - NB	Stanford	Ashby	Oak	0.81	II	1	2	20.6	C	25.9	B
178	SR 123 San Pablo - NB	Ashby	Dwight	Berk	0.68	II	1	2	33.4	A	32.1	A
179	SR 123 San Pablo - NB	Dwight	Allston	Berk	0.4	II	1	2	29.3	B	30.9	A
180	SR 123 San Pablo - NB	Allston	University	Berk	0.20	III	1	2	10.5	D	17.2	C
181	SR 123 San Pablo - NB	University	Gilman	Berk	0.86	II	1	2	21.7	C	31.0	A
182	SR 123 San Pablo - NB	Gilman	Marin	Alb - Berk	0.47	II	1	2	26.1	B	26.4	C
183	SR 123 San Pablo - NB	Marin	Washington	Alb	0.45	III	1	2	20.1	B	37.7	A
184	SR 123 San Pablo - NB	Washington	Carlson	Alb	0.53	II	1	2	25.0	B	29.7	A
185	SR 185 (14th) - SB	42nd	46th St	Oak	0.26	II			18.1	C	16.7	D
186	SR 185 (14th) - SB	46th St	Seminary	Oak	0.79	II			25.4	B	25.4	B
187	SR 185 (14th) - SB	Seminary	73rd	Oak	0.80	II	1	2	15.5	D	15.5	D
188	SR 185 (14th) - SB	73rd Ave	98th Ave	Oak	1.39	II	1	2	23.7	C	21.1	C
189	SR 185 (14th) - SB	98th	Broadmoor	Oak	0.74	II	1	2	28.7	B	25.9	B
190	SR 185 (14th) - SB	Broadmoor	Davis	SL	0.73	II	2	2	23.9	C	22.4	C
191	SR 185 (14th) - SB	Davis	San Leandro	SL	1.04	III	2	2	22.0	B	20.2	B
192	SR 185 (14th) - SB	San L Blvd	Hesperian	SL	0.94	II	2	2	23.7	C	23.1	C
193	SR 185 (14th) - SB	Hesperian	Bayfair	SL	0.46	II	2	2	26.6	B	22.2	C
194	SR 185 (14th) - SB	Bayfair	170th	Unin	1.24	II	3	2	28.9	B	24.8	B
195	SR 185 (14th) - SB	170th	Llewelling	Unin	0.21	II	3	2	21.5	C	21.2	C
196	SR 185 (14th) - SB	Llewelling	Sunset	Unin	1.02	II	3	2	22.2	C	22.7	C
197	SR 185 Hayward - SB	Sunset	SR 92/238	Hay	0.84	III	2	2	18.3	C	17.3	C
198	SR 185 Hayward - NB	SR 92/238	Sunset	Hay	0.84	III	2	2	21.1	B	20.2	B

2010 LOS Monitoring Study Preliminary Results for Arterials - AM Peak Period

#	CMP Route	Segment Limits From	To	Jurisdiction	Length (miles)	Arterial	Plan Area	No of Lanes	2008 LOS Results Speed	2008 LOS Results LOS	2010 LOS Results Speed	2010 LOS Results LOS
199	SR 185 (14th) - NB	Sunset	Llewelling	Unin	1.11	II	3	2	23.9	C	24.8	B
200	SR 185 (14th) - NB	Llewelling	170th	Unin	0.21	II	3	2	28.3	B	29.7	B
201	SR 185 (14th) - NB	170th	Bayfair	Unin	1.24	II	3	2	25.3	B	26.3	B
202	SR 185 (14th) - NB	Bayfair	Hesperian	SL	0.47	II	2	2	26.3	B	29.5	B
203	SR 185 (14th) - NB	Hesperian	San L Blvd	SL	0.94	II	2	2	27.3	B	22.4	C
204	SR 185 (14th) - NB	San Leandro	Davis	SL	1.02	III	2	2	20.0	B	13.5	C
205	SR 185 (14th) - NB	Davis	Broadmoor	SL	0.72	II	2	2	24.4	B	23.4	C
206	SR 185 (14th) - NB	Broadmoor	98th	Oak	0.74	II	1	2	20.7	C	20.7	C
207	SR 185 (14th) - NB	98th Ave	73rd Ave	Oak	1.37	II	1	2	18.8	C	19.4	C
208	SR 185 (14th) - NB	73rd Ave	Seminary	Oak	0.60	II	1	2	15.3	D	13.6	E
209	SR 185 (14th) - NB	Seminary	46th St	Oak	0.79	II			30.2	A	24.2	B
210	SR 185 (14th) - NB	46th St	42nd	Oak	0.26	II			10.9	E	7.2	(F)
211	SR 238 (Foothill) - NB	Jackson	City Center	Hay	0.62	III	2	3	13.7	C	14.4	C
212	SR 238 (Foothill) - NB	City Center	I-580	Unin-Hay	0.73	II	3	3	30.0	A	30.9	A
213	SR 238 (Foothill) - NB	I-580 Ramp	I-580 Merge	Unin	0.71	I	3		48.6	A	47.6	A
214	SR 238 (Foothill) - SB	I-580	Cstro V Blvd	Unin	0.86	I	3		42.7	A	64.0	A
215	SR 238 (Foothill) - SB	Cstro V Blvd	City Center	Hay-Unin	1.03	II	2	3	27.6	B	17.6	D
216	SR 238 (Foothill) - SB	City Center	Jackson	Hay	0.62	III	2	3	13.3	C	11.7	D
217	SR 238 (Mission) - NB	680 NB Rmp	Stevenson	Fre	2.46	I	3	2	35.1	A	35.5	A
218	SR 238 (Mission) - NB	Stevenson	Nursery	Fre	2.57	I	3	2	31.1	B	43.0	A
219	SR 238 (Mission) - NB	Nursery	Tamarack	UC	2.10	I	3	2	29.0	B	31.6	B
220	SR 238 (Mission) - NB	Tamarack	Industrial	UC - Hay	1.96	I	3	2	31.1	B	31.9	B
221	SR 238 (Mission) - NB	Industrial	Sorenson	Hay	1.47	II	2	2	24.7	B	30.1	A
222	SR 238 (Mission) - NB	Sorenson	Jackson	Hay	1.83	II	2	2	23.5	C	25.6	B
223	SR 238 (Mission) - SB	Jackson	Sorenson	Hay	1.83	II	2	2	17.1	D	26.0	B
224	SR 238 (Mission) - SB	Sorenson	Industrial	Hay	1.47	II	2	2	23.6	C	24.1	B
225	SR 238 (Mission) - SB	Industrial	Tamarack	Hay - UC	1.96	I	2	2	31.3	B	33.4	B
226	SR 238 (Mission) - SB	Tamarack	Nursery	UC	2.07	I	3	2	25.6	C	25.3	C
227	SR 238 (Mission) - SB	Nursery	Stevenson	Fre	2.57	I	3	2	31.2	B	30.0	B
228	SR 238 (Mission) - SB	Stevenson	680 NB Rmp	Fre	2.46	I	3	2	25.8	C	24.1	C
229	SR 260 (Tubes) - NB	Atlantic	7th/Web	Oak	1.31	I	1	2	23.1	B	34.7	A
230	SR 260 (Tubes) - SB	7th/Web	Atlantic	Oak	1.31	I	1	2	13.9	C	14.5	C
231	SR 262 (Mission) - EB	I-880 NB	I-680 NB	Fre	1.33	I	3	2	27.8	C	25.9	C
232	SR 262 (Mission) - WB	I-680 NB	I-880 SB	Fre	1.11	I	3	2	11.0	(F)	21.3	D

Note * denotes the longer roadway segments that were split into short segments in 2009 CMP Update. The short segments have been used in the 2010 LOS Monitoring Study.

'- Free Flow Speeds for the portion of SR 84 classified as Rural have been re-assessed in the 2010 LOS Monitoring Study

2010 LOS Monitoring Study Results- Ramps and Special Segments for AM Peak Period

#	CMP Route	Segment Limits		Jurisdiction	Plan Area	Length (miles)	No of Lanes	Free Flow Speed	2008 LOS Results		2010 LOS Results	
		From:	To:						Speed	LOS	Speed	LOS
1	I-80/I-580 Interchange	I-80 SB	I-580 EB	Oak	1	0.30	1	38.0	47.7	A	49.9	A
2	I-80/I-580 Interchange	I-580 WB	I-80 NB	Oak	1	0.41	1	40.0	33.2	B	32.4	B
3	SR 24 WB/I-580 WB	SR 24 ON	I-580 OFF	Oak	1	0.69	2	Weaving	41.4	n/a	29.7	N/A
4	I-580/SR 24 Interchange	I-580 WB	SR-24 EB	Oak	1	0.51	2	45.0	38.9	B	36.7	B
5	I-580/SR 24 Interchange	SR-24 WB	I-580 EB	Oak	1	0.74	2	51.0	45.8	B	52.7	A
6	SR13/SR 24 Interchange**	SR-13 NB	SR-24 EB	Oak	1	0.32	1	40.0	**6.2**	**(F)**	**5.2**	**(F)**
7	SR13/SR 24 Interchange	SR-24 WB	SR-13 SB	Oak	1	0.16	1	31.0	33.2	A	32.0	A
8	I-880/I-238 Interchange	I-880 SB	I-238 EB	SL	2	0.74	2	47.0	54.2	A	49.9	A
9	I-880/I-238 Interchange	I-238 WB	I-880 NB	SL	2	0.54	1	54.0	58.3	A	32.7	D
10	I-880/I-238 Interchange	I-880 NB	I-238 EB	SL	2	0.42	1	32.0	34.9	A	61.5	A
11	I-880/I-238 Interchange	I-238 WB	I-880 SB	SL	2	0.76	1	53.0	33.3	D	47.2	A
12	I-580 /I-238 Interchange	I-580 SB	I-238 EB	Hay	2	0.35	1	37.0	21.9	E	21.5	E
13	I-580 /I-238 Interchange	I-238 WB	I-580 NB	Hay	2	0.32	1	38.0	37.1	A	37.6	A
14	I-580/I-680 Interchange	I-580 EB	I-680 NB	Pleas	4	0.46	1	35.0	24.2	D	24.0	C
15	I-580/I-680 Interchange	I-580 EB	I-680 SB	Pleas	4	0.28	1	42.0	24.1	E	26.0	D
16	I-580/I-680 Interchange	I-680 NB	I-580 EB	Pleas	4	0.90	2	63.8	58.9	A	60.6	A
17	I-580/I-680 Interchange	I-680 NB	I-580 WB	Pleas	4	0.66	1	41.0	42.2	A	47.5	A
18	I-580/I-680 Interchange	I-580 WB	I-680 NB	Pleas	4	0.41	1	51.5	43.8	B	45.0	B
19	I-580/I-680 Interchange	I-580 WB	I-680 SB	Pleas	4	0.66	1	39.0	28.4	C	28.2	C
20	I-580/I-680 Interchange	I-680 SB	I-580 EB	Pleas	4	1.23	2	68.1	59.2	B	59.8	B
21	I-580/I-680 Interchange	I-680 SB	I-580 WB	Pleas	4	0.43	1	58.4	44.9	C	53.4	A
22	I-880/SR 260 Connection*	I-880 SB	SR-260 WB	Oak	1	0.99	1	32.0	N/A	N/A	24.0	A
23	I-880/SR 260 Connection	SR-260 EB	I-880 NB	Oak	1	0.36	1	35.0	12.6	(F)	18.8	E

*Starting from the 2010 LOS Monitoring runs, the travel route has been changed to the correct route of I-880 SB ramp exit to 5th Street and then connecting to Webster Tube from Broadway/5th Street intersection under the I-880 bridge.

This page intentionally left blank

ALAMEDA County Transportation Commission

ACCMA ▪ 1333 Broadway, Suite 220 ▪ Oakland, CA 94612 ▪ PH: (510) 836-2560
ACTIA ▪ 1333 Broadway, Suite 300 ▪ Oakland, CA 94612 ▪ PH: (510) 893-3347
www.AlamedaCTC.org

Memorandum

DATE: September 2, 2010

TO: Planning, Policy and Legislation Committee

FROM: Bijan Yarjani, Ph.D., Project Manager
Alameda County Technical Advisory Committee

SUBJECT: **I-80 Integrated Corridor Mobility (ICM) Project - Review of the I-80 Corridor System Management Plan (CSMP)**

Recommendations:
It is recommended that the Commission review the I-80 Corridor System Management Plan (CSMP). This is an information item and no action is requested.

The development of the CSMP is a requirement of the California Transportation Commission (CTC) for the allocation of state funds to projects programmed in the Corridor Mobility Improvement Account (CMIA) of Proposition 1B.

Summary:
At its meeting in April 2010, the ACCMA Board reviewed the CSMP for the I-580 East Corridor. At this same meeting, the ACCMA Board also authorized the Executive Director to sign the CSMP for the I-580 East Corridor as well as CSMPs for three other freeway corridors in Alameda County where there are projects funded with CMIA funds: I-880, State Route 24, and I-80.

In July 2010, the ACCMA Board reviewed and accepted the CSMP for the SR-24 Corridor. This month, staff is bringing to the Committee and the Commission the CSMP for the I-80 and I-880 Corridors, under Agenda Item 4.2 and Item 4.3, respectively, and would complete the required development of all four CSMPs in the County.

Background:
The California Transportation Commission required Corridor System Management Plans (CSMP) for corridors in which Corridor Mobility Improvement Account funded projects are programmed. The plans identify a corridor management strategy that all jurisdictions, regional agencies, and modal operators along the corridor agree to and that will guide corridor development, operation, and investment from all sources. The CSMP development process is led by Caltrans, MTC and ACCMA for four corridors in Alameda County: I-80, I-880, I-580 East and SR-24. Caltrans is requesting that CSMPs be signed by the Executive Officer of each of the partner agencies for the I-580 East, I-880, SR-24 and I-80 final plans as documents to be used in the regional transportation planning process. The Board reviewed the I-580 East CSMP and SR-24 CSMP at its April and July 2010 meetings respectively. The CSMP for the I-80 and I-880 Corridors are under Agenda Items 4.2 and 4.3 being presented to the Committees and Commission, in September 2010 concurrently.

The CSMP focuses on highway mobility within the context of the State's most congested urban corridors. While the CSMP describes the arterials and other modes in the corridor, the focus of the recommended strategies is on maximizing the existing infrastructure through coordinated application of system management technologies such as ramp metering, coordinated traffic signals, changeable message signs for traveler information and incident management. It describes the current land use, transit, bicycle/pedestrian facilities, and the FOCUS regional blueprint Priority Development and Conservation Areas. These are provided as a backdrop for understanding how the highway corridor works. The result is a system planning document that will serve as a tool to assist in the regional transportation planning process. The ACCMA/ACTC intends will use the recommendations of the CSMP and any future CSMP to inform the development of the Countywide Transportation Plan (CWTP), which in turn informs the Regional Transportation Plan (RTP).

The I-80 CSMP has been completed. This corridor is a North-South route located in Alameda and Contra Costa Counties on a 20.5-mile segment of Interstate 80 (I-80) from the 80/580/880 Distribution Structure to the Carquinez Bridge, and on State Route (SR) 123 (San Pablo Avenue) and other local arterials along the corridor that interconnect I-80 and San Pablo Avenue.

The I-80 CSMP development process was a joint effort of Caltrans, MTC, and ACCMA/ACTC. This Core Stakeholder Group worked with local planning agencies through a Technical Advisory Committee (TAC) to develop this plan. The goal was to propose strategies to achieve the highest mobility benefits to travelers across all jurisdictions and modes along the I-80 CSMP Corridor

Fiscal Impacts:
No fiscal impact.

Attachments*:*
Attachment A – I-80 Fact Sheet
Attachment B - I-80 Executive Summary

I-80 ICM Fact Sheet

Interstate 80 ICM corridor system management plan

Steps in I-80 CSMP Development Process

- Identify Stakeholder Team and Describe Corridor
- Identify Existing Corridor Performance and Current Corridor Management Strategies
- Complete Corridor Performance Assessment and Identify Potential Strategies
- Complete Draft Traffic Operations Analysis Report
- Complete Evaluation of ICM Strategies
- Complete Draft CSMP (July 2010)
- Complete Final CSMP (September 2010)

Interstate 80 CSMP

Interstate 80 is a major east-west freeway connecting San Francisco to Solano County (and beyond), passing through Alameda County and Contra Costa County. The corridor has ranked as the most congested corridor in the entire San Francisco Bay Area since the mid 1990s. Currently, the demand on the freeway exceeds the roadway capacity, causing unreliable travel times, inconsistent operating speeds, breakdowns, as well as diversion to the local arterials. The congestion on the roadway network contributes to an increase in incident rates, including rear-end accidents on both freeway and local arterials. These contribute to delays for transit services operating along the corridors. The combined effect of the incidents and the congestion hinders efficient response times and creates additional secondary incidents.

Building additional freeway capacity is not feasible on the I-80 corridor due to right of way, financial, environmental, and political constraints. Corridor System Management Plan (CSMP) solutions therefore focus on strategies that:

- Maximize the efficiency of the existing roadway system.
- Encourage increased use of other modes.
- Reduce the occurrence and impact of incidents.
- Reduce or manage peak period vehicle travel demand.

Understanding CSMPs

A CSMP responds to the following questions:

- **How is a corridor performing?**
- **Why is it performing that way?**
- **What strategies and improvements best address the problems?**

The need for preparing CSMPs is based on the need to efficiently and effectively use all transportation modes and facilities in congested corridors so as to maximize mobility, improve safety and reduce delay costs. Each CSMP will address highways, local parallel roadways, regional transit services and other regional modes pertinent to corridor mobility.

The California Transportation Commission (CTC) required Corridor System Management Plans (CSMPs) be developed for corridors within which projects are funded from the Corridor Mobility Improvement Account (CMIA - created by the passage of Proposition 1B in Nov. 2006).

Corridor Area and Partner Agencies

Alameda County Congestion Management Agency (ACCMA) has been working in partnership with regional and local agencies and other stakeholder groups to develop a Corridor System Management Plan (CSMP) for the I-80 Corridor, covering the freeway and major arterials (San Pablo Avenue) from the Carquinez Bridge in Contra Costa County to San Francisco Bay Bridge in Alameda County.

The I-80 CSMP is expected to be completed by September 2010. Its recommendations will then be considered in the transportation planning processes that are conducted by the Metropolitan Transportation Commission (MTC), Caltrans, ACCMA, the Contra Costa Transportation Authority (CCTA) and all of the agencies that are responsible for planning, funding and implementing regional and interregional transportation projects.

Continued on back

Fact Sheet

Interstate 80 ICM corridor system management plan

Congested Locations (2008) on Interstate 80

Morning Peak-Period

1. **Westbound I-80 from Pinole Valley/Appian Way to SR 4**
2. **Westbound I-80 from San Pablo Dam Road to Richmond Parkway.**
3. **Westbound I-80 from Gilman Street to I-580 merge.**
4. **Westbound I-80 from Powell Street to University Avenue.**

Evening Peak-Period

5. **Eastbound I-80 from I-580/Gilman Street to University Avenue.**
6. **Carlson Boulevard to Central Avenue.**
7. **Eastbound I-80 from San Pablo Avenue to Carlson Boulevard.**
8. **Eastbound I-80 from SR4/Pinole Valley Road to Hilltop Drive.**

Corridor Specific Issues

- Major commuter route for people in Solano, Contra Costa, and Alameda counties to jobs in San Francisco and Oakland and other major economic centers.
- Major special trip generating/producing activity centers of Port of Oakland, Oakland International Airport and Coliseum.
- Consequently ranked as the most congested corridor in the Bay Area since the mid 1990s.
- The demand on the freeway exceeds the capacity.
- No right-of-way available to build additional freeway capacity.
- High volume of regional and interregional commuter/freight traffic create operational challenges.

I-80 Integrated Corridor Mobility (I-80 ICM) Project

The primary goal of the I-80 ICM Project is to enhance the current Transportation Management System along the I-80 corridor. The project will utilize State-of-the-Practice ITS technologies to enhance the effectiveness of the existing transportation network in both freeway and parallel arterials in Alameda and Contra Costa Counties. At a cost of $87.7 million, the project includes the following sub-systems:

- Freeway Management System
- Arterial Management System
- Transit Management System
- Traveler Information System
- Commercial Vehicle Operations (CVO)
- Traffic Surveillance and Monitoring System
- Incident Management System

The CSMP requirement is noted in the Baseline Agreements of all projects receiving CMIA funding. CMIA funds have been allocated for the following improvement project on the I-80 corridor:

- I-80 Integrated Freeway/Local Road Management - Carquinez to Bay Bridge

Alameda County Congestion Management Agency (ACCMA)/Alameda County Transportation Commission (ACTC) is the lead on CSMP for the I-80 ICM project in cooperation with regional and local transportation partners and stakeholders. Progress on CSMP milestones is monitored by the CTC-appointed CMIA Delivery Council.

For questions regarding the CSMP, please contact

- Bijan Yarjani, Senior Transportation Planner at 510-350-2328 or email at byarjani@accma.ca.gov
- John Hemiup, Senior Transportation Engineer at 510-350-2332 or email at jhemiup@accma.ca.gov

I-80 Integrated Corridor Mobility (ICM)

Corridor System Management Plan

Executive Summary

Prepared by

DKS Associates
TRANSPORTATION SOLUTIONS

August 25, 2010

Interstate 80 Integrated Corridor Mobility Project

Corridor System Management Plan
Executive Summary
DRAFT FINAL

By

***DKS** Associates*
1000 Broadway, Suite 450
Oakland, CA 94607
(510) 763-2061

August 25, 2010

Table of Contents

List of Figures

List of Tables

1. CSMP OVERVIEW

A Corridor System Management Plan (CSMP) is a transportation planning document that provides for the safe, efficient and effective mobility of people and goods within the most congested transportation corridors. Each CSMP presents an analysis of existing and future traffic conditions and proposes traffic management strategies and capital improvements to maintain and enhance mobility within each corridor. The corridor management planning strategy is based on the integration of system planning and system management. The CSMP transportation network is defined to include, but is not limited to, State Highways, major arterials, intercity and regional rail service, regional transit services, and other regional modes pertinent to corridor mobility.

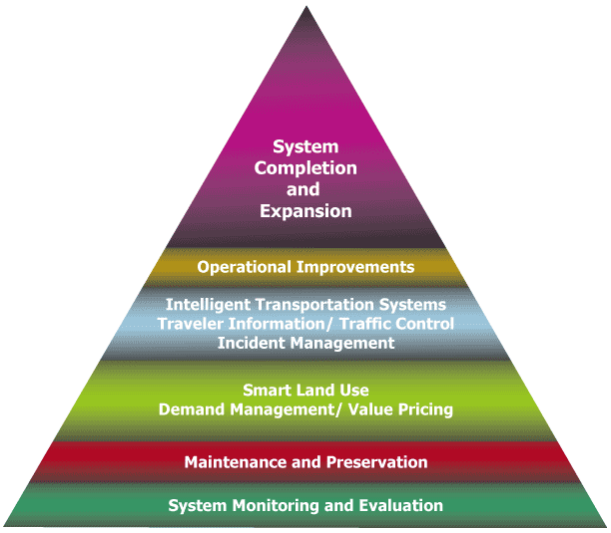
CSMPs are being developed throughout the State for corridors within which funding is being used from the Corridor Mobility Improvement Account (CMIA) and Highway 99 Bond Programs created by the passage of the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, approved by the voters as Proposition 1B in November 2006. The intent is to eventually develop CSMPs for all urban freeway corridors.

Purpose and Need Statement

The immediate purpose of preparing CSMPs is to satisfy the requirements to qualify for funding highway improvements under the CMIA and Highway 99 Bond programs. The California Transportation Commission (CTC) adopted guidelines and a program of projects for funding. On March 15, 2007, the CTC adopted Resolution CMIS-P-0607-02. In Sections 2.12 and 2.13 of this resolution, the CTC resolved that "…the Commission expects Caltrans and regional agencies to preserve the mobility gains of urban corridor capacity improvements over time that will be described in CSMPs, which may include the installations of traffic detection equipment, the use of ramp metering, operational improvements, and other traffic management elements as appropriate…" and "…the nominating agencies including the installations of detection equipment and other supporting elements, to the project delivery council on a semiannual basis…". CSMPs are prepared based on the need to efficiently and effectively use all transportation modes and facilities in congested corridors so as to maximize mobility, improve safety and reduce delay costs.

The ultimate purpose of the CSMP is to serve as a tool for efficiently and effectively optimizing the safety, mobility, productivity and reliability of the existing system. The CSMP allows the State, regional agencies, and local jurisdictions to manage and operate the transportation corridor to maintain the highest sustained productivity and reliability based on the assessment and evaluation of performance measures. The CSMP assesses current performance, identifies casual factors for congestion and proposes the best mix of improvements, strategies, and actions to optimize corridor performance.

Consistency With Other Plans



The CSMP approach is consistent with the goals and objectives of the Governor's Strategic Growth Plan. The objectives of the plan are to decrease congestion, improve travel time and safety. Key elements of the strategy are illustrated in **Figure 1** The foundation of transportation system management, which is the base of the pyramid, is system monitoring and evaluation. It is critical to understand what is occurring on the transportation network so that the value of any investment decision made at a higher level in the pyramid is not limited. The next layers up the pyramid are focused on making the best use of existing resource and reducing the demand for new transportation facilities.

Figure 1 Key Elements of Strategic Growth Plan

The CSMP is also consistent with the Regional Transportation Plan (RTP), city and county general plans, and multi-modal plans. In addition, the CSMP will assist in fulfilling the goals of recently enacted legislation such as Assembly Bill 32 that addressed air quality and green house gas emissions and Senate Bill 375 that addressed the land use by:

- Improving mobility on the state highway system to more optimum speeds to reduce vehicle emissions.
- Providing viable transportation alternatives and accessibility across modes to encourage transit and bicycling and decrease single occupant auto use.

2. THE I-80 CSMP CORRIDOR

This CSMP covers the segment of I-80 between the San Francisco Bay Bridge in Alameda County and the Carquinez Bridge in Contra Costa County (see **Figure 2**).

I-80 is a major east-west freeway connecting San Francisco and Sacramento, passing through Alameda County and Contra Costa County. The I-80 corridor has ranked as the most congested corridor in the entire San Francisco Bay Area since the mid-1990s. For more than forty years, congestion has been present in the I-80 corridor. Even after past major investments in freeway capacity, segments of the corridor remain congested for up to ten hours a day.

Figure 2 I-80 CSMP Corridor

Currently, the demand on the freeway exceeds the roadway capacity, causing unreliable travel times, erratic operating speeds, breakdowns, as well as diversion to the local arterials. The congestion on the roadway network contributes to an increase in incidents, including rear-end accidents on both the freeway and local arterials. The frequency of incidents also contributes to delays for transit services operating along the corridor. The combined effect of the incidents and the congestion hinders efficient response times and creates potential for additional secondary incidents.

3. OPERATIONS CONDITIONS

Existing Conditions

In general, I-80 has three mixed flow lanes between the Carquinez Bridge and Interstate 580 (I-580 in Albany) West and five mixed flow lanes between I-580 West (Albany) and Powell Street (Emeryville). Several I-80 freeway segments include an auxiliary lane. In addition, High Occupancy Vehicle (HOV) lanes are accessible in the corridor for three or more people during the hours of 5:00AM to 10:00AM and 3:00PM to 7:00PM.

Volumes in the I-80 corridor range from 117,000 to 288,000 vehicles per day. Truck volumes account for 1.8% to 5.4%. The morning peak is westbound and the evening peak is eastbound. HOV vehicles represent 20% of the auto trips in the AM and 15% in the PM. Accidents in the Berkeley/Emeryville segment are nearly double the statewide average.

Transit accounts for 10 to 20 percent of the person trips within the corridor. Average weekday ridership at 9 BART stations within the corridor is 54,000. Average weekday bus ridership within the corridor on AC Transit and WestCAT is 25,000 and 4,000 respectively.

The following is the list bottlenecks that occur in the corridor by direction and peak period of occurrence:

1. Westbound I-80 at Appian Way on-ramp (AM peak)
2. Westbound I-80 at San Pablo Dam Road on-ramp (AM peak)
3. Westbound I-80 at Gilman Street on-ramp (AM peak)
4. Westbound I-80 at Powell Street on-ramp (AM peak)
5. Westbound I-80 at I-80/I-580/I-880 diverge (PM peak)
6. Eastbound I-80 at I-580 off-ramp (AM and PM peak)
7. Eastbound I-80 at Carlson Boulevard on-ramp (PM peak)
8. Eastbound I-80 at San Pablo Ave (PM peak)
9. Eastbound I-80 at SR 4 off-ramp (PM peak)

These bottleneck locations are illustrated in **Figure 3**.

Figure 3 Existing I-80 Bottleneck Locations

Near Term Conditions (2015)

In the near term (2015), it is forecasted that freeway volumes will increase over existing conditions by approximately 16%. Transit ridership in the corridor will increase by 12%. Corridor Vehicle Miles Traveled (VMT) will increase by approximately 12% and Vehicle Hours Traveled (VHT) will increase by approximately 20%. Because of the instability in the system in the future, freeway Vehicle Hours of Delay (VHD) is projected to increase by 50% in the AM and 100% in the PM. Existing bottlenecks will still be present but with longer queues and longer times to clear the queues.

Long Term Conditions (2035)

Households are expected to increase in Alameda County and Contra Costa County by 28.4% between 2005 and 2035. For the I-80 corridor, households will increase20.9% from 113,407 in 2005 to 137,154 in 2035. Employment in Alameda and Contra Costa Counties will increase by 49.5% between 2005 and 2035, rising from 1,123,521 to 1,679,458. Within the I-80 corridor, 2005 employment is 126,335 and would increase by 44.8% to 182,942 by 2035.

Based on this increase in population and employment, I-80 peak hour demand is forecasted to increase between 21% and 67% for the AM peak hour and between 16% and 35% for the PM peak hour between 2005 and 2035. Total freeway demand within the corridor, defined as the total vehicle demand that uses a section of Interstate 80 within the study corridor, is forecasted to increase by 51.9% during the AM peak hour and 47.4% during the PM peak hour by 2035. This includes vehicle trips with an origin and/or destination within the corridor and through trips where both the origin and destination of the trips exist outside the corridor.

As demands are forecasted to increase, travel times will increase, delays will increase significantly, and speeds will decrease significantly under the baseline trend conditions (no further improvements to corridor after 2015). In 2035, the I-80 corridor's VMT increases by approximately 37% and 32% during the respective AM and PM peak hours while the VHT increases by approximately 109% and 77% during the respective AM and PM peak hours.

4. CANDIDATE STRATEGIES

Existing traffic demand on I-80 exceeds the capacity on several segments during both peak periods. The congestion on the freeway causes the traffic queues on the on-ramps to back up onto the local arterial network increasing the overall system congestion. In the future years, without congestion mitigation/management strategies and improvements, the traffic condition in the I-80 corridor would be significantly much worse as traffic growths continues in both peak periods., based on the regional travel demand models forecast output.

One direct approach for mitigating these impacts, and to improve mobility and reliability within the corridor, is to add or expand freeway capacity by adding lanes. However, the potential for expansion is constrained physically (on both sides by water and development) institutionally and politically. The majority of stakeholders do not support roadway widening due to the:

1. High cost associated with right of way acquisition, roadway construction and roadway operation and maintenance.
2. Significant environmental impacts associated with the roadway construction and roadway operation and maintenance.
3. Potential for the increased capacity to lead to an increase in vehicles using the corridor.

Given this limitation, and the magnitude of projected growth, it is expected that some of the demand will shift to other times (expand the peak period) and some forecasted trips will not occur. However, it is still expected that the demand will grow beyond what the baseline roadway

system, plus minor improvements, can accommodate. Therefore there is a need to focus on strategies that:

1. Maximize the efficiency of the existing roadway system.
2. Encourage increased use of other modes.
3. Reduce the occurrence and impact of incidents.
4. Reduce or manage peak period vehicle travel demand.

The types of strategies can be applied in the I-80 corridor to address existing and forecasted deficiencies include: Freeway and Arterial Geometric Improvements, Freeway and Arterial Management and Operations Improvements, Transit Improvements, Non-Motorized Mode Improvements, Demand Management Strategies, Traveler Information Improvements, Goods Movement Policies, ITS Improvements.

The primary objective of System Management improvements is to get maximum benefit out of the existing system. Examples of System Management improvements or strategies include ramp metering, managed lanes, shoulder use, variable speed limit signs, congestion pricing, traffic signal improvements, freeway/ramp/surface street signal coordination, incident management, and reversible lane control.

The proposed I-80 ICM Project (see **Figure 4**) is focused on the implementation of several of these System Management strategies, plus systems that can support the implementation of additional or expanded strategies in the future. The project also includes integration with the East Bay SMART Corridors Program (a joint Alameda and Contra Costa County ITS program) and the Caltrans District 4 Transportation Management Center (TMC).

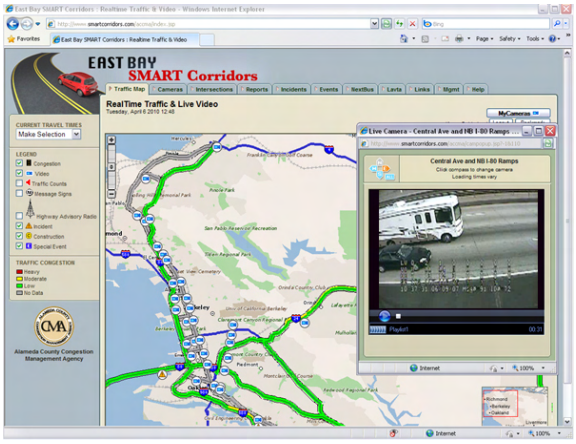
Figure 4 I-80 Intergrated Corridor Mobility Project Concept

The strategies encompassed as part of the I-80 ICM Project include:

1. **Freeway Management System**
   - ATMS (Variable Advisory Speed Limits and Lane Use Signals)
   - Adaptive Ramp Metering
   - Changeable Message Signs
   - Highway Advisory Radio
   - Travel Time Information
   - Traffic Monitoring (CCTV System)

2. **Incident Management System**
   - Incident Response plan
   - Lane Management
   - End-of-the-queue warning
   - System Vehicle detection system
   - Speed Harmonization (SH);

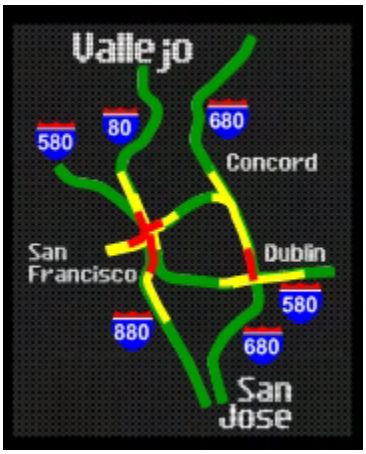
3. **Arterial Management System**
   - Traffic Signal Synchronizations
   - Traffic Signal Interconnect
   - Emergency Vehicle Preemption
   - Transit Signal Priority
   - Trailblazer Signs
   - Traffic Monitoring (CCTV System)



4. **Transit Management System**
   - Transit Signal Priority (TSP)

5. **Traveler Information System**
   - Changeable Message Signs
   - Highway Advisory Radio
   - Personalized 511 System
   - Comparative Travel Times
   - Parking Information System

6. **Traffic Surveillance and Control System**
   - Traffic Detection
   - Traffic Monitoring



Near Term Strategies

The primary improvements recommended in the near-term for the I-80 corridor are System Management Improvements. The primary objective of System Management improvements is to get maximum benefit out of the existing system. Examples of System Management improvements or strategies include ramp metering, managed lanes, shoulder use, variable speed limit signs, congestion pricing, traffic signal improvements, freeway/ramp/surface street signal coordination, incident management, and reversible lane control.

The proposed I-80 ICM Project is focused on the implementation of several of these System Management Strategies, plus systems that can support the implementation of additional or expanded strategies in the future. The project also includes integration with the East Bay SMART Corridors Program (a joint Alameda and Contra Costa County ITS program) and the Caltrans District 4 Transportation Management Center (TMC). The strategies include:

1. Adaptive Ramp Metering
2. Variable Advisory Speed Limits (VASL)
3. Lane Management

The analysis conducted as part of the *I-80 ICM Project Traffic Operations Analysis Report* indicates that the proposed combination of ICM strategies (Ramp Metering, VASL, and Lane Management) is projected to provide significant operational and safety benefits under both recurring and non-recurring conditions.

Under recurring conditions, the proposed I-80 ICM Project is projected to provide significant operational benefits to freeway operations, especially in the westbound direction, and an overall benefit to operations in the corridor. While the freeway benefits would be partially offset by increased delay at the on-ramps and the arterial approaches, the I-80 ICM Project is projected to still yield an overall reduction in network delay during both the AM and PM peak periods. The I-80 ICM Project is expected to have a generally minimal impact on trips originating within Contra Costa or Alameda Counties. A sampling of such trips indicates that in most cases ramp meter delay is offset by mainline speed improvement resulting in negligible change in overall travel time. Another important benefit of the I-80 ICM Project is the potential reduction in

accident rates. In areas where metering has been implemented, accident rate reductions have been reported. The I-80 ICM Project can also produce greenhouse benefits in the form of reduced emissions and fuel consumption by improving freeway and network-wide performance.

The 2015 AM and PM peak period system performance results are measured by vehicle hours of delay and average speeds. In the AM peak period, the recommended project produces a significant improvement to freeway operation under recurring condtions with 26% reduction in freeway delay and 7% increase in average speed compared to the No Build alternative. During the PM peak, the I-80 ICM Project is expected to produce a 9% reduction in network delay and 11% reduction in freeway delay compared to the No Build alternative.

Under non-recurring conditions, the proposed I-80 ICM Project is expected to provide significant network and freeway benefits. While the exact benefits of the proposed full Incident Management alternative (Ramp Metering + VASL + Lane Management) will vary depending upon the location, duration, and severity of the incident, the analysis of a sample accident during the AM peak period within the segment of westbound I-80 where Lane Management capabilities are proposed was found to yield a 12% reduction in westbound I-80 hours of delay reduced by 12%, including a 19% reduction within segment from Central to the 580/880 Split. For eastbound I-80, lane management capabilities are not included as part of the current I-80 ICM Project. However, a test analysis of an eastbound accident during the PM peak period showed that the combination of the three ICM strategies yields significant benefit in terms of reduced delay in the Central to SR 4 segment (-10%), total delay on eastbound I-80 (-5%). Furthermore, all of the proposed ICM strategies provide safety benefits. Depending on the extent and combination of strategies deployed, the potential safety benefits include not only a decrease in primary incidents of 3% to 30%, but also a decrease in secondary incidents of 40% to 50%[1].

Intermediate Term Strategies

While the I-80 ICM Project and the extension of the eastbound HOV lane on I-80 are expected to provide significant operational and safety benefits on I-80 in the near-term (2015) timeframe, significant congestion affecting the freeway, ramps and arterials is projected to remain. A detailed review of the 2015 simulation models revealed several projected problem locations including several on- and off-ramps, interchanges, mainline merging and weaving areas, and arterials under 2015 demands. These findings, plus design considerations, were used to define a set of potential interim improvements defined as those that could be implemented in the next five to ten years. The interim improvements include a number of operational and low or moderate cost capital improvements. Some of the potential improvements studied are concepts that have previously been proposed as part of other efforts. Others were defined based on an assessment of freeway, ramp and arterial bottlenecks observed in the 2015 Build – ICM simulation models. The interim improvements were packaged into three scenarios for analysis.

The first two involve singular, operational improvements intended to address mainline operations on I-80 ICM corridor, while the third includes a package of freeway, ramp and arterial capital improvements. In each case, the scenarios build upon the I-80 ICM project improvements programmed for the corridor. While the metering of the I-580 Westbound connector to westbound

[1] Freeway Management and Operations Handbook, FHWA, 2003 (revised 2006)

I-80 was shown to yield a reduction in delays on I-80 westbound, local ramps and the arterials compared to the 2015 Build – ICM scenario, these delay reductions are offset by increased delay on the eastbound I-580 freeway segment. This leads to slight increase in network-wide vehicle hours of delay compared to the 2015 Build – ICM scenario. Furthermore, under the assumed design, forecasted AM peak period demands on this connector will exceed the maximum flow rate through the meter resulting in the cumulative build-up of queues The analysis also suggests that the re-striping of westbound I-80 approaching the split to I-580/I-880 will generate significant increases in network and freeway delay during both peak periods. Compared to the 2015 Build – ICM Project alternative. .The interim improvements and scenarios examined are summarized in **Table 1**.

Table 1 Potential Intermediate Term Improvement Projects/Scenarios

Type	Location	Improvement Scenario		
		1	2	3
System Management	Westbound 80: Meter the EB I-580 connector near the Central Avenue interchange; provide 3 GP lanes	X		
Mainline Modifications	Westbound 80: restripe WB 80 to 580/880 connector to 4 lanes (currently three)		X	X
Ramp Modifications	*Add GP lanes:*			
	• WB SR 4: reconstruct bridge to allow for 3rd GP lane and moving meter limit line downstream			X
	• WB Buchanan Street: widen to add 2nd general purpose lane			X
	Add Storage/widen:			
	• WB Richmond off-ramp: add 2nd Thru lane			X
	• WB Central off-ramp: add 3rd lane			X
	• WB Gilman off-ramp: add 3rd lane			X
	• EB Powell off-ramp: add 4th lane			X
	• EB San Pablo Dam Road off-ramp: add 4th lane			X
Interchange Improvements	• Powell Street: modify Powell/frontage intersection - Allow westbound left turn and southbound through to use westbound I-80/Bay Bridge on-ramp			X
Auxiliary Lanes	• WB San Pablo Dam Road on-ramp to San Pablo Avenue off-ramp – extend current aux lane between San Pablo Dam Rd and Edwards/McBryde Ave			X
	• WB Potrero Avenue on-ramp to Carlson Boulevard off-ramp			X
	• EB Ashby Avenue on-ramp to University Avenue off-ramp			X
	• EB San Pablo Ave on-ramp to San Pablo Dam Road off-ramp – extend current aux lane			X
	• EB San Pablo Dam Road on-ramp to El Portal Drive off-ramp			X
Arterial Geometric Improvements	• SB San Pablo Avenue at Richmond Parkway – widen to provide 2nd LT bay			X
	• SB San Pablo Avenue at San Pablo Dam Road – extend LT bay			X

Source: DKS Associates, 2010

This increased delay is generally associated with the additional weaving required to access the lanes for eastbound I-580, especially for those coming on at the Powell on-ramp. This traffic must now get completely across 4 lanes of traffic rather than just 3. This additional "turbulence" results in a worsening of conditions approaching the split.

The package of improvements included as Interim Improvement Scenario 3 provide for the greatest benefit in terms of network delay reduction. Compared to the No Build alternative, this scenario yields a reduction of approximately 1900 vehicles hours of delay (14%) during the AM peak period, and approximately 4200 hours (11%) during the PM peak period. This represents a reduction of 840 and 1060 hours of delay during the AM and PM peak periods, respectively, compared to the Build – ICM project alternative.

These benefits are achieved despite the fact that this package of improvements includes the re-striping of westbound I-80 approaching the split to I-580/I-880 that, as described above, appears to produce additional delay during both peak periods. The disbenefit of the re-striping is offset by improved operations associated with the other proposed improvements.

While the results indicate feasibility of the proposed interim improvements, two further studies are recommended: (a) I-580E to I-80W Ramp Metering Plan and (b) I-580/I-80/SR-24 Maze Area Design Plan. These studies should expand the simulation corridor limit to cover a broader area to account for queues and congestion outside of the current corridor limit. Also, estimating cost in addition to benefit in monetary values would be very helpful to decision-makers to compare scenarios and prioritize capital investment.

Long Term Strategies

By 2035, demands on some segments of I-80 in the study corridor are forecasted by up to 60%. With this level of growth, conditions along I-80 are expected to worsen considerably. This will result in not only the increased severity of congestion associated with existing bottlenecks, but also congestion occurring in more areas and in the off-peak direction. Conditions on the arterials in the corridor are also expected to worsen.

As noted previously, major capacity expansion along I-80 is unlikely due to physical and institutional constraints. Given this limitation, and the magnitude of projected growth, plans for the corridor must inclue an combination of more localized improvements plus strategies that further maximize the efficiency of the existing roadway system, reduce the occurrence and impact of incidents, encourage increased use of other modes, and reduce or manage peak period vehicle travel demand. The types of strategies can be applied in the I-80 corridor to address existing and forecasted deficiencies include: Freeway and Arterial Geometric Improvements, Freeway and Arterial Management and Operations Improvements, Transit Improvements, Non-Motorized Mode Improvements, Demand Management Strategies, Traveler Information Improvements, Goods Movement Policies, ITS Improvements.

In general, longer-term projects includes those requiring more significant physical work and thus funding, and those that require considerable consensus-building and may face more significant institutional issues. Key projects include major public transportation expansion, additional roadway capacity, revised goods movement strategies, and large-scale ITS improvements. The following sections identifiy a number of specific improvement projects and strategies as derived from existing planning and programming documents, plus the results from the 2015 traffic analysis

simulation results and 2035 travel demand forecasts. These represent a financially unconstrained listing of potential improvements. An analysis of these individual improvements was not conducted as part of this CSMP. Thus, further study of these improvements, individually or as packages, is required.

Roadway Geometric Improvements

While major capacity expansion in the I-80 corridor is unlikely, smaller improvements are possible that may address localized deficiencies. Potential freeway improvements include auxiliary lanes, ramp modifications and ramp intersection modifications. Surface streets improvements could include adding new roadways in the eastern end of the corridor where higher growth is projected in future years. Potential improvements may also include the widening of existing roadway and intersections. Potential roadway geometric improvement projects include the following:

Ramp Modifications:

1. Buchanan Street: Modify westbound on-ramp to I-80 WB from HOV lane to general purpose lane
2. El Portal Drive: Convert proposed eastbound on-ramp HOV priority lane to general purpose lane or widen ramp to provide second general purpose lane.
3. Richmond Parkway: Convert proposed eastbound on-ramp HOV lane to a general purpose lane
4. Ashby Avenue: Modify eastbound on-ramp to EB I-80 to allow traffic from Ashby to use both metered lanes.
5. San Pablo Avenue: Reconfigure eastbound on-ramp to increase storage length.
6. SR 4: Construct direct connectors between westbound I-80 and eastbound SR 4
7. Powell Street: Widen eastbound off-ramp and on-ramp
8. University Avenue: Modify eastbound on-ramp to provide a second general-purpose lane at the meter.
9. Cutting Boulevard: Construct new connector ramps to the Del Norte BART station
10. Cumming Skyway: Modify westbound on-ramp to provide a second general-purpose lane or an HOV lane
11. Solano Avenue: Modify westbound on-ramp to provide a second general-purpose lane

Interchange Improvements:

1. Powell Street: Allow westbound left turn and southbound through for the westbound off-ramp
2. Gilman Street: Convert interchange to roundabout (Planned Project)
3. Central Avenue: Shift a portion of on-ramp and off-ramp traffic to the I-580 interchange with Central Ave
4. Pinole Valley Road: Provide a right turn lane on eastbound on-ramp and bus turnout/shelter on westbound ramp
5. SR 4: Construct direct connectors between westbound I-80 and eastbound SR 4
6. McBryde Avenue: Upgrade and improve
7. San Pablo Dam Road: Upgrade and improve
8. El Portal Drive: Upgrade and improve
9. Cutting Boulevard: Construct new connector ramps to the Del Norte BART station
10. Hilltop Drive: Upgrade and improve

Mainline auxiliary lanes:

1. San Pablo Dam Road off-ramp to El Portal Drive on-ramp in the eastbound direction
2. Hilltop Drive off-ramp to Richmond Parkway on-ramp in the eastbound direction
3. Potrero Avenue off-ramp to Carlson Boulevard on-ramp in the westbound direction

System Management Improvements

The primary objective of System Management improvements is to get maximum benefit out of the existing system. Examples of System Management improvements or strategies include ramp metering, managed lanes, shoulder use, variable speed limit signs, congestion pricing, traffic signal improvements, freeway/ramp/surface street signal coordination, incident management, and reversible lane control. The proposed I-80 ICM Project is focused on the implementation of several System Management strategies, plus systems that can support the implementation of additional or expanded strategies in the future. The project also includes integration with the East Bay SMART Corridors Program (a joint Alameda and Contra Costa County ITS program) and the Caltrans District 4 Transportation Management Center (TMC). However, some System Management strategies were not included in the I-80 ICM project due to funding, timing and institutional constraints. The strategies that were not included in the I-80 ICM project can be considered as possible future improvements.

The following system management projects and strategies are the recommended for future consideration in the I-80 corridor:

Freeway Management

1. Cummings Skyway to Cutting Boulevard: Shoulder utilization in the westbound direction for incident management and transit vehicles
2. Corridor-wide: I-80 ICM Project-Freeway Elements
3. Corridor-wide: connector metering at I-580 eastbound interchange
4. Corridor-wide: Freeway shoulder use to add additional capacity during periods of congestion and /or during an incident
5. Corridor-wide: Implement lane management in eastbound direction for non-recurring conditions
6. Corridor-wide: Convert HOV lanes to Express Lanes

Arterial Management

1. I-80 ICM Project-Arterial Elements
2. Carlson Boulevard: Signalize I-80 ramp intersections
3. Gilman Street: Signalize I-80 ramp intersections
4. San Pablo Avenue: Extend SMART Corridor
5. Corridor-wide: Enhance/implement freeway/ramp meter/surface street signal coordination

Transit Improvements

The travel demand forecasts suggest that transit demand will increase by 20% by the year 2015, and more than double by 2035. Even with this growth, auto travel demand is also expected to grow leading to more severe congestion in the corridor. There are currently a number of transit and facilities in the corridor. To accommodate the forecasted growth and, ideally, promote even greater transit mode share to help reduce congestion on the roadway network, improvements to the transit system will be necessary.

Several transit improvements are already included in the programmed/planned projects in the corridor. Potential I-80 improvements include:

Ferry:

1. Provide service between Berkeley/Albany and San Francisco
2. Provide service between Richmond and San Francisco

3. Provide service between Hercules and San Francisco

Rail:

1. Hercules: Construct Capitol Corridor train station

BART:

1. Berkeley: Improve Ashby Station to support Ed Roberts Campus and future TOD
2. Richmond: Provide transportation improvements on the east side of the Richmond Station to accommodate TOD
3. El Cerrito: Provide real-time transit information displays
4. El Cerrito Del Norte: Provide transportation improvement to support TOD
5. System-wide: Provide additional or new parking capacity
6. Extend BART to Richmond Hilltop and Hercules

Bus

1. Northern Alameda County: Improve AC transit facilities including new operating system
2. Expand WestCAT service including purchase of vehicles
3. Install WestCAT-furnished real-time transit information displays
4. Purchase new express buses for I-80 express service to be provided by AC transit, Vallejo Transit, and WestCAT
5. Expand Bus Rapid Transit from Richmond Parkway Transit Center to Hercules

Transit Centers

1. New Hercules Transit Center, including relocation of park and ride facility and construction of express bus facilities
2. Construct Phase 2 of Hercules Inter-modal Station
3. Expand Richmond Parkway Transit Center

Other Measures

1. I-80 ICM Project-Transit elements

Non-Motorized Mode Improvements

Non-motorized mode of travel is an alternative to both auto and transit modes. The I-80 freeway corridor exceeds the maximum trip length for bicycle trips and pedestrian travel. Non-motorized travel is more appropriate for short trips and may reduce surface street traffic. Proposed non-motorized mode improvements within the I-80 corridor include:

Pedestrian

1. Richmond: Install pedestrian count-down signals, improve sidewalk conditions, construct mid-block lighted crossings, and landscape Nevin Avenue, Barrett Ave & other areas
2. El Cerrito: Develop pedestrian, transit stop and streetscape improvements along San Pablo Avenue
3. Improve pedestrian access and safety for transit access routes.
4. Close the Bay Trail gaps along Richmond Parkway between Pennsylvania Avenue and Gertude Avenue, north of Freethy Blvd to Payne Drive, from Payne to Cypress, and from Pinole Shores to Parker Ave

Bicycle

1. Richmond: Construct Class I Bicycle Trail from Carlson Blvd to I-80 along abandoned railroad property and Richmond-Ohlone Greenway Gap Closure was currently designed.
2. Improve bike detection in the corridor at signalized intersections.

3. Provide exclusive right-of-way for bikes wherever feasible to enhance bike safety.
4. Provide more room for bikes on BART. This will facilitate in the extension of hours that bike riders can use BART services and reduce the parking demand at BART stations.
5. Increase the availability of bike lockers and bike parking at BART stations.

Other

1. Berkeley: Improve Ashby/I-80 interchange/Aquatic Park Access streetscape, bicycle, and pedestrian Facilities

Demand Management Strategies

Federal Highway Administration (FHWA) recognizes that managing demand can no longer stop at encouraging travelers to change their travel mode from driving alone to choosing a carpool, public transit, or other commute alternative. Managing demand today is about providing all travelers, regardless of whether they drive alone, with choices of location, route, and time, not just mode of travel. The contemporary concept of travel demand management encompasses broader set of transportation goals due to need to manage demand in multiple situations and conditions as well as the influence of information and the technologies to deliver it. The I-80 corridor has no right of way to increase capacity to the roadway network. Therefore, it is more critical to pay attention to the strategies to shift the demand to other modes, to non-peak hours and possible means to reduce the demand.

The possible strategies for the I-80 corridor include:

1. Worksite flextime allows employees to set their own arrival and departure time to/from work – within established time boundaries agreed to by their employer. In congested areas like I-80 corridor, it may encourage employees to avoid the most congested travel times, reducing the demand on roadway and/or transit systems during peak-demand periods.
2. Telecommuting: Telework programs and policies at the worksite from structured, formally-implemented telework programs and policies to more informal telework arrangements established between individual employees and their direct supervisors
3. Transit-Oriented and Pedestrian Oriented Design: Focusing a mix of land uses, such as employment, housing, restaurants, services, retail and more in well designed, pedestrian friendly and/or near transit connections can reduce demand for vehicle travel and reduce trip distances.
4. Live Near Work Incentive Programs: Live near work programs provide incentives for employees to live near their place of employment. Examples include down payment assistance, location efficient mortgages and rent subsidies. By providing housing close to employment, this program can lower the costs of commuting, lessen the pressure on infrastructure, and generate more pedestrian traffic in business districts.
5. Live Near Transit Mortgage Incentives: Live near transit programs offer mortgage incentives to encourage residential location near transit facilities. The programs recognize that household transportation expenses can be lower for residences well served by public transportation, and allow homebuyers to use these transportation savings as additional borrower income in qualifying for a home mortgage. These options are well recognized

by stakeholder agencies in the corridor and they are already pursuing to the extent feasible.

Traveler Information

Currently, traveler information on I-80 corridor is provided via Changeable Message Signs (CMS), Highway Advisory Radios (HAR), telephone and the internet. CMS and HAR systems are used to provide real time information and directions to the driver, plus they are used to advise about upcoming events. These systems are controlled from Caltrans District 4 Transportation Management Center. The internet is used to provide more detailed information to the public. The primary method of sharing information on the Internet and the telephone is via the Bay Area 511 system. The 511 system receives real time information from detectors, Closed-Circuit Television (CCTV) cameras and from some management applications. This information is then analyzed and used to display meaningful, up to the minute information. The I-80 ICM project will provide more ITS devices to disseminate the information to travelers in the near-term.

The long-term recommendations for the I-80 corridor is to extend the capability of traveler information to emerging personalized devices and in-vehicle navigation system to influence traveling choices in selecting departure times, destinations, and routes in addition to modes of transportation. Necessary devices will be provided at bus transit and rail stations to disseminate the traveler and transit information.

Goods Movement Policies

Trucks and other heavy vehicles use I-80 to move goods within the Bay Area to and from northern and southern California, and points beyond. The Port of Oakland and other important industrial and commercial facilities are located along the corridor or are linked by the I-80 freeway. During the peak periods, heavy truck traffic can consume road capacity which contributes significantly to congestion. Because of the importance of efficient freight movement to the economy, the needs of this group will be factored into the solution; moreover, the solution must be consistent with the Bay Area good movements' strategies while still allowing the corridor to meet its congestion and safety goals. Improving the commercial vehicle operators' safety, efficiency, mobility and travel times are the most important goals for this group of users.

Some of possible solutions are described below:

1. Roadway Time of Day Restrictions – Due to the severe congestion on I-80 freeway during morning and afternoon peak period, commercial vehicles can be restricted to use the road network at some busy hours at some congested sections of the freeway. Trucks can choose not to be restricted by paying a certain fee to obtain a special ticker/license for driving during the restricted hour. The institutional issues and the fee should be studied in more details to make this solution feasible.
2. Lane Restrictions – Because trucks and passenger cards are significantly different in terms of performance and operation pattern, when possible trucks should be separated from passenger vehicles. For I-80, the following options can be considered:
    a. Exclusive lanes – designate lanes exclusively for trucks use. Passenger cars are not allowed using the truck lanes while trucks can only use the truck lanes.

b. Suggested exclusive lanes – trucks can only use the designated truck lane while passenger cards do not have restriction.
c. Mixed lane – only trucks are allowed to use the designated truck lanes, and only passenger cars are allowed to use the designated passenger car lanes. The other lanes in the middle can be used by both trucks and passenger cars.

The selection of the lane designation options should be studied in more details with a benefit/cost model that accounts for truck volumes, passenger car volumes, highway characteristics, and incident history.

3. Remote Transfer Sites - Remote transfer sites can be considered where the commercial vehicles can hold the load until the traffic conditions on road and conditions at port are favorable for load transfer.

5. RECOMMENDATIONS

For the purposes of this CSMP, near-term is defined as 0 to 5 years, intermediate term is defined as 5to 10 years, and long-term is defined as 10 to 25 years.

Near Term

Projects and strategies recommended for implementation in the near-term include those that have secured funding, obtained environmental clearance, are under design, or do not require significant physical work or funding. Based on these criteria, the recommended near-term improvements include:

- Complete construction of the eastbound I-80 HOV lane from SR 4 to the Carquinez Bridge;
- Implement the I-80 ICM Project, including the system management and transit improvements.

In addition to these projects, it is recommended that the following activites be pursued in the near-term:

- establish an I-80 Corridor Management Committee,
- conduct a before-and-after study of the I-80 ICM Project,
- develop corridor wide land use policies,
- conduct a Maze Study,
- conduct an I-580 Ramp Metering Study,
- analyze effectiveness of the individual interim projects identified in the CSMP, and
- analyze weekend conditions.

The objective of these last five activities is to further assess potential intermediate and long-term improvements and strategies for the corridor.

Intermediate Term

Those projects and strategies recommended for intermediate term implementation are those which have support but have not acquired funding, have on-going environmental clearance or design, or do not require significant physical work or funding. Proposed projects include expanded or enhanced deployment of ICM capabilities within the corridor, minor to moderate

geometric improvementsto both the freeway and arterial network, improved connectors between roadways, signalization of un-signalized interchange intersections, and an increase in public transit service.

Other efforts recommended for the intermediate term include improving automatic data collection reliability, and undertaking studies needed to facilitate the implementation of long-term improvements and strategies. Specific studies include those related to BART extensions including multimodal access improvements, analysis of Commercial Vehicle policies to reduce peak hour traffic, and an assessment of the benefits of converting the HOV Lanes to Express Lanes.

Long Term

Longer-term projects includes those requiring more significant physical work and thus funding, and those that require considerable consensus-building and may face more significant institutional issues. Key projects include major public transportation expansion, additional roadway capacity, revised goods movement strategies, and large-scale ITS improvements. The latter may include the implementation of full ATM strategies within the corridor including new technologies such as Intellidrive. These projects should be programmed for study to determine cost, benefits and the expected level of public support.

6. LIMITATIONS OF THE I-80 CSMP STUDY

The I-80 ICM corridor is a very long, congested, and high incident corridor passing through Alameda and Contra Costa Counties. As a result of the highly saturated conditons and frequent occurrence of incidents, conditions within the corridor can vary significantly day-to-day and even within a single peak period making it very difficult to define a “typical day” for modeling. The best available data and modeling tools were used in the I-80 ICM CSMP study. It should be recognized that to overcome the reliability of available data, a variety of data sources were used. This, however, introduced issues regarding consistency between these sources and the days or periods when the different data was collected. While significant effort was taken to overcome these data reliability and consistency issues, it is important to recognize the variability of conditions that exists in this corridor.

The analysis conducted for the I-80 CSMP involved a combination of applying travel demand models and micro-simulation models. Travel demand models were used to generate projections of base and future demands and assess long-term strategies. Micro-simulation models were used to conduct detailed operational analysis for various alternatives under 2015 demand conditions. In the case of the micro-simulation model, the testing of the various I-80 ICM system management elements (adaptive ramp metering, VASL, and incident lane management) pushed the limits of the software and required the development of new software modules. While both tools were invaluable to the conduct of this effort, it is important to recognize the limitations of these tools and the need to exercise professional judgment when interpreting the results and making recommendations or decisions based on the model outputs.

This page intentionally left blank

ALAMEDA County Transportation Commission
ACCMA ■ 1333 Broadway, Suite 220 ■ Oakland, CA 94612 ■ PH: (510) 836-2560
ACTIA ■ 1333 Broadway, Suite 300 ■ Oakland, CA 94612 ■ PH: (510) 893-3347
www.AlamedaCTC.org

Memorandum

DATE: September 2, 2010

TO: Planning, Policy and Legislation Committee (PPLC)

FROM: Bijan Yarjani, Ph.D., Project Manager
Alameda County Technical Advisory Committee

SUBJECT: **Review of the I-880 Corridor System Management Plan (CSMP)**

Recommendations:
It is recommended that the Commission review the I-880 Corridor System Management Plan (CSMP). This is an information item and no action is requested.

The development of the CSMP is a requirement of the California Transportation Commission (CTC) for the allocation of state funds to projects programmed in the Corridor Mobility Improvement Account (CMIA) of Proposition B.

Summary:
At its meeting in April 2010, the ACCA Board reviewed the CSMP for the I-580 East Corridor. At this same meeting, the ACCMA Board also authorized the Executive Director to sign the CSMP for the I-580 East Corridor as well as CSMPs for three other freeway corridors in Alameda County where there are projects funded with CMIA funds: I-880, State Route 24, and I-80.

In July 2010, the ACCMA Board reviewed and accepted the CSMP for the SR-24 Corridor. This month, staff is bringing to the Committee and the Commission the CSMP for the I-80 and I-880 Corridors, under Agenda Item 4.2 and Item 4.3, respectively, and would complete the required development of all four CSMPs in the County.

Discussion or Background:
The California Transportation Commission required Corridor System Management Plans (CSMP) for corridors in which Corridor Mobility Improvement Account funded projects are programmed. The plans identify a corridor management strategy that all jurisdictions, regional agencies, and modal operators along the corridor agree to and that will guide corridor development, operation, and investment from all sources. The CSMP development process is led by Caltrans, MTC and ACCMA for four corridors in Alameda County: I-80, I-880, I-580 East and SR-24. Caltrans is requesting that CSMPs be signed by the Executive Officer of each of the partner agencies for the I-580 East, I-880, SR-24 and I-80 final plans as documents to be used in the regional transportation planning process. The ACCMA Board reviewed the I-580 East CSMP and SR-24 CSMP at its April and July 2010

meetings respectively. The CSMP for the I-80 and I-880 Corridors are under Agenda Items 4.2 and 4.3 being presented to the Committees and Commission, in September 2010 concurrently.

The CSMP focuses on highway mobility within the context of the State's most congested urban corridors. While the CSMP describes the arterials and other modes in the corridor, the focus of the recommended strategies is on maximizing the existing infrastructure through coordinated application of system management technologies such as ramp metering, coordinated traffic signals, changeable message signs for traveler information and incident management. It describes the current land use, transit, bicycle/pedestrian facilities, and the FOCUS regional blueprint Priority Development and Conservation Areas. These are provided as a backdrop for understanding how the highway corridor works. The result is a system planning document that will serve as a tool to assist in the regional transportation planning process. The ACCMA intends to use the recommendations of the CSMP and any future CSMP to inform the development of the Countywide Transportation Plan (CWTP), which in turn informs the Regional Transportation Plan (RTP).

The I-880 CSMP has been completed. This corridor is a North-South route, approximately 42 miles long, and runs through portions of Santa Clara and Alameda Counties. It begins at I-880/I-280 interchange in the City of Campbell and terminates in the City of Oakland at 7th Street/Grand Avenue. The I-880 CSMP development process was a joint effort of Caltrans, MTC, and ACCMA. This Core Stakeholder Group worked with local planning agencies through a Technical Advisory Committee (TAC) to develop this plan. The goal was to propose strategies to achieve the highest mobility benefits to travelers across all jurisdictions and modes along the I-880 CSMP Corridor.

Fiscal Impacts:
No fiscal impact.

Attachments:
Attachment A – I-880 FACT Sheet
Attachment B - I-880 Executive Summary

Fact Sheet

INTERSTATE 880 corridor system management plan

Interstate 880 CSMP: Connecting the Bay Area

Interstate 880 connects the San Francisco-Oakland Bay Bridge with Silicon Valley, serving the Port of Oakland, Oakland International Airport, Mineta International Airport in San José, and about ten eastern Bay Area cities. I-880 also provides a critical link for the movement of goods between the Central Valley and the Port of Oakland north of the I-238/580 Corridor interchange. On its southern end, the I-880 corridor carries commuters to and from work in the "high-tech capital of the world."

Understanding CSMPs

A Corridor System Management Plan (CSMP) responds to the following questions:

- **How is a corridor performing?**
- **Why is it performing that way?**
- **What strategies and improvements best address the problems?**

The need for preparing CSMPs is based on the need to efficiently and effectively use all transportation modes and facilities in congested corridors so as to maximize mobility, improve safety and reduce delay costs. Each CSMP will address highways, local parallel roadways, regional transit services and other regional modes pertinent to corridor mobility.

The California Transportation Commission (CTC) requires CSMPs be developed for corridors within which projects are funded from the Corridor Mobility Improvement Account (CMIA – created by the passage of Proposition 1B in November 2006).

Corridor Area and Partner Agencies

Caltrans is working in partnership with local agencies and groups to develop a CSMP for the 42-mile long I-880 Corridor, whose limits are the I-280 interchange in Campbell to Oakland near the San Francisco-Oakland Bay Bridge.

The I-880 CSMP is expected to be completed by Sepember 2010. Its recommendations will then be considered in the transportation planning processes that are conducted by Caltrans, the Metropolitan Transportation Commission (MTC), the Alameda County Congestion Management Agency (ACCMA), and the Santa Clara Valley Transportation Authority (VTA); all agencies that are responsible for funding and implementing regional and interregional transportation projects.

Steps in I-880 CSMP Development Process

- Identify Stakeholder Team and Describe Corridor
- Identify Existing Corridor Performance and Current Corridor Management Strategies
- Complete Corridor Performance Assessment & Identify Potential Strategies
- Complete Evaluation of Potential Strategies
- Complete Draft CSMP **(June 2010)**
- Adopt Final CSMP **(Sept. 2010)**

continued on the back

Fact Sheet

INTERSTATE 880 corridor system management plan

Top 10 Congested Locations (2007) for Interstate 880

Morning Peak-Period

1. Southbound Marina Boulevard to south of Industrial Parkway — 3,790 VHD*
2. Southbound Thornton Ave. to Mission Blvd. — 2,640 VHD*
3. Southbound North of West Grand Avenue to Maritime Street — 2,450 VHD*
4. Northbound Freemont Blvd. North to Tennyson Road — 1,200 VHD*
5. Northbound Hesperian Blvd. to Davis St. — 590 VHD*

Evening Peak-Period

6. Northbound Decoto Road to Tennyson Road — 2,880 VHD*
7. Northbound South of Dixon Landing Road to north of Mission Blvd. — 2,330 VHD*
8. Southbound SR-237 to Brokaw Road — 1,270 VHD*
9. Southbound Brokaw Road to Bascom Ave — 960 VHD*
10. Southbound Industrial Blvd. to Fremont Blvd — 640 VHD*

Source: State of the System 2008

** VHD stands for Daily Vehicle Hours of Delay. Delay occurs when average travel speed falls below 35 mph for 15 minutes or more.*

The CSMP requirement is noted in the Baseline Agreements of all projects receiving CMIA funding. CMIA funds have been allocated for the following improvement projects on the I-880 Corridor:

- SB HOV Lane from Marina to Hegenberger
- HOV Lanes SR-237 to US-101
- I-880/280/Stevens Creek Interchange

Caltrans District 4 is the lead agency on CSMP development in cooperation with regional and local transportation partners and stakeholders. Progress on CSMP milestones is monitored by the CTC-appointed CMIA Delivery Council.

Corridor Specific Issues

- Truly intermodal corridor including freeways, major arterials, rail, bus transit and ferry service
- Key international trade corridor (Port of Oakland and commercial airports in Oakland and San José)
- Trucks comprise between 4-11% of daily traffic
- Urban freeway with major traffic generators corridor-wide: event/retail venues, commercial, industrial and residential centers
- Central Business Districts for two of the largest cities in California at either end (Oakland and San José)
- Transbay collector from three bridges: Bay Bridge (I-80), San Mateo Bridge (SR-92), and Dumbarton Bridge (SR-84)
- Transportation management technology widely deployed

For questions regarding the CSMP, please contact D4 Senior Transportation Planner **Erik Alm** at 510-286-6053 or email at erik_alm@dot.ca.gov

C O R R I D O R S Y S T E M
M A N A G E M E N T P L A N

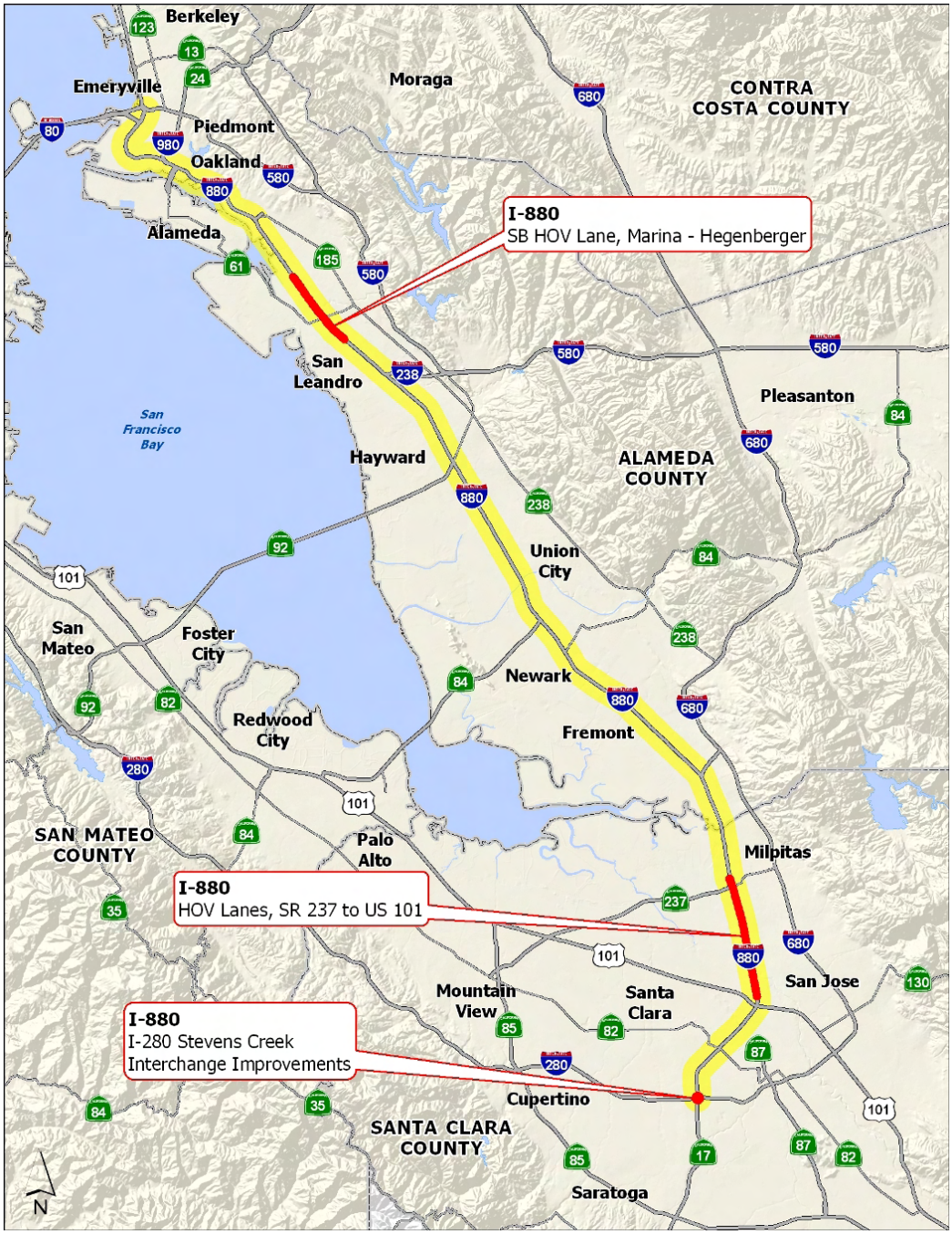
INTERSTATE 880
CSMP SUMMARY

DRAFT FINAL

8/11/10

CSMP Corridor Limits

The Interstate 880 Corridor in the San Francisco Bay Area is a north/south route beginning at I-280 traversing northward terminating at 7th street in Oakland.



I-880
Corridor System Management Plan

APPROVED BY:

BIJAN SARTIPI, Date
District 4 Director
California Department of Transportation

I accept this Corridor System Management Plan for the I-880 Corridor as a document informing the regional transportation planning process.

ACCEPTED BY:

STEVE HEMINGER, Date
Executive Director
Metropolitan Transportation Commission

ACCEPTED BY:

DENNIS FAY, Date
Executive Director
Alameda County Congestion Management Agency

JOHN RISTOW, Date
Chief CMA Officer
Santa Clara Valley Transportation Authority

I-880
Corridor System Management Plan

Approval Recommended by:

_____

Lee Taubeneck, Deputy District Director
Division of Transportation Planning & Local Assistance

_____

Katie Benouar, Chief
Office of System Planning

_____

Juliana Gum, Chief
Traffic Operations Strategies

Document Prepared by:

_____

Erik Alm, Chief
Office of System Planning, East Branch

_____

Robert E. Rosevear, Associate Transportation Planner
Office of System Planning, East Branch

Stakeholder Acknowledgement

District 4 wishes to acknowledge the time and contributions of stakeholder groups and partner agencies. Current and continuing Corridor System Management Plan (CSMP) development is dependent upon the close participation and cooperation of its key stakeholders. This CSMP represents a cooperative commitment to develop a corridor management vision for the I-880 Corridor. The strategies evaluated have the potential to impact the local arterial system and the regional and local planning agencies that have the corridor within their jurisdiction. These representatives participated in the I-880 Corridor Technical Advisory Committee (TAC) and provided essential information, advice and feedback for the preparation of the I-880 Corridor Management Plan Demonstration and this CSMP. The stakeholders/partners include:

- Metropolitan Transportation Commission
- Alameda County Congestion Management Agency*
- Alameda County Transportation Improvement Authority*
- AC Transit
- Bay Area Rapid Transit District
- City of Oakland
- City of Alameda
- City of San Leandro
- City of Hayward
- City of Union City
- City of Fremont
- Alameda County
- Santa Clara Valley Transportation Authority

A website, **www.corridormobility.org** has been created to support the development of the CSMPs and to provide stakeholders and the public with more information and an opportunity to provide input and review documents.

Disclaimer: The information, opinions, commitments, policies and strategies detailed in this document are those of Caltrans District 4 and do not necessarily represent the information, opinions, commitments, policies and strategies of partner agencies or other organizations identified in this document.

*****ACCMA and ACTIA combined to form the Alameda County Transportation Commission in July 2010.

Dedication

To Patricia “Pat” Weston
(1951 - 2009)

Caltrans District 4 Planners dedicate this Corridor System Management Plan (CSMP) to the memory of Pat Weston, Chief, Caltrans Office of Advance System Planning, whose seemingly limitless energy and passion for transportation system planning in California has been an inspiration to countless transportation planners and engineers within Caltrans and its partner agencies. Pat's efforts elevated the importance of corridor-based system planning, performance measurement for system monitoring, and the blending of long-range planning with near-term operational strategies. This has resulted in stronger planning partnerships with Traffic Operations in Caltrans and led directly to the requirement to conduct comprehensive corridor planning through CSMP documents. This is but one of a long list of major achievements in Pat's lengthy Caltrans career. She generously shared her knowledge, wisdom and guidance with us over the years. She will be sorely missed as a planner, mentor and friend.

I-880 CSMP INTRODUCTION

This Corridor System Management Plan (CSMP) represents a cooperative commitment to develop a corridor management vision for the Interstate 880 (I-880) corridor. The CSMP development process was a joint effort of the California Department of Transportation (Caltrans), the Metropolitan Transportation Commission (MTC), the Alameda County Congestion Management Agency (ACCMA) and the Santa Clara Valley Transportation Authority (VTA). This Core Stakeholder Group worked with local planning agencies, through an (I-880) Corridor Technical Advisory Committee (TAC) and an I-880 CSMP Working Group to develop this plan. The goal is to propose strategies to achieve the highest mobility benefits to travelers along the I-880 CSMP Corridor.

Planning and Policy Framework

Since passage of the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act, known as Proposition 1B, in November 2006, Caltrans has implemented the CSMP process statewide for all corridors with projects funded by the Corridor Mobility Improvement Account (CMIA). The California Transportation Commission (CTC) requires that all corridors with a CMIA-funded project have a CSMP that is developed with regional and local partners. The CSMP recommends how the congestion-reduction gains from the CMIA projects will be maintained with supporting system management strategies. The CTC has also provided guidance in the 2008 and 2010 Regional Transportation Plan (RTP) Guidelines that CSMPs are an important input to the development of an RTP.

In the San Francisco Bay Area, Caltrans is completing nine CSMPs, with a tenth added in July 2010. This I-880 CSMP reflects data and projects from MTC's current Regional Transportation Plan (RTP), *Change in Motion, Transportation 2035 Plan*, adopted April 2009. The CSMP recommends strategies for consideration in the regional transportation planning process. In the Alameda County portion of the corridor, the CSMP development process has taken place in coordination with University of California (UC) Berkeley's California Center for Innovative Transportation (CCIT). Analysis of the Santa Clara County segment of the Corridor was done in part through MTC's Freeway Performance Initiative (FPI). This work has been tied together through the efforts of an I-880 CSMP Working Group.

The I-880 CSMP

This CSMP focuses on highway mobility within the context of one of the State's most congested urban corridors. While the CSMP describes the arterials and other modes in the corridor, the focus of the recommended strategies is to enable better system management of the highway. It also describes the current land use, transit, bicycle/pedestrian facilities, and Priority Development Areas (PDAs) identified from the Bay Area's FOCUS regional blueprint program. These are provided as a backdrop for understanding how the highway corridor works. By focusing on more efficient operation of the highway network, the CSMP moves toward optimizing current infrastructure, improving our ability to analyze and identify what leads to congestion in a corridor, and strengthening interagency partnerships to ensure that all parts of the transportation system work together well.

The objectives of the I-880 CSMP are to reduce delay within the corridor (mobility), reduce variation of travel time (reliability), reduce accident and injury rates (safety), restore lost lane miles (productivity) and reduce distressed lane miles (system preservation).

The limits of the I-880 CSMP were determined, in collaboration with MTC, by identifying the key travel corridor in which CMIA-funded projects are located. The CMIA-funded projects are:

- I-880 High Occupancy Vehicle (HOV) Lane Widening Project, SR-237 to US-101
- I-880 Southbound HOV Lane Extension, Hegenberger to Marina Boulevard
- I-880 I-280 Stevens Creek Interchange Improvements

In addition, the I-880 Mission Boulevard Interchange Completion project is seeking CMIA funding.

Methodology

A corridor performance assessment and technical analysis of the I-880 CSMP Corridor was conducted on the Alameda County portion of the Corridor by UC Berkeley CCIT through the I-880 Corridor Management Plan Demonstration. A similar performance assessment of the Santa Clara County segment of the Corridor was done through MTC's FPI program. The performance assessment evaluated the current highway performance along the corridor and determined causes of performance problems.

The results of these two I- 880 corridor analysis efforts (as well as the CMIA project analyses) have been incorporated into the I-880 CSMP through the efforts of the I-880 CSMP Working Group. This working group included members of the Core Stakeholder Group of agency partners, whose primary task was to coordinate activities and material necessary for the development of the I-880 CSMP following the completion of the I-880 Corridor Management Plan Demonstration in January 2010. The Working Group members met regularly to review and comment on the synthesis of technical documents, analyses, recommendations and other material necessary to produce the CSMP.

The I-880 Corridor Management Plan Demonstration work took place between 2005 and 2009, engaging stakeholder agencies through the Alameda County Congestion Management Agency's (ACCMA) I-880 Corridor TAC. The TAC has met at irregular intervals since 2005 to provide input on existing and future performance as well as conclusions and recommendations for short and long-term corridor management improvement strategies. Simulation modeling was used to identify future bottlenecks and analyze the impacts of future travel conditions along the corridor under different operational strategies and investment scenarios. The results of the comprehensive corridor analysis were first discussed at the TAC in November 2008.

The CSMP also builds upon the I-880 project recommendations of ACCMA's 2008 Central County Freeway Study (also known as the Central County Local Alternative Transportation Improvement Program (LATIP)), the 2009 Southern Alameda County SR-84 Historic Parkway LATIP, VTA's 2008 I-880 Corridor Study and the Santa Clara Valley Transportation Plan (VTP2035). These recommendations add system management and other strategies to provide additional benefit and efficiencies.

The proposed short-term and long-term improvement strategies include:

- Intelligent Transportation System (ITS) improvements
- Corridor-wide ramp metering
- Construct HOV lanes
- Extend and Construct Auxiliary Lanes
- Additional transit and Travel Demand Management (TDM) improvements

First Generation CSMP

This CSMP represents the "*first generation"* of corridor system management plans informing the Transportation Planning process. This CSMP identifies corridor management strategies applied on a network wide basis. The selected strategies address existing and forecasted mobility, lost productivity, bottlenecks, and reliability problems. The CSMP recognizes that transit services and goods movement are also adversely affected by the same problems. To implement some of these strategies, key capital projects are identified. This list is not meant to be inclusive of all potential projects in the corridor.

Since Caltrans and the regions launched this first cycle of corridor system management planning in 2007 (called *first generation CSMPs*), the statewide planning policy context has evolved significantly. AB 32 policy on reducing greenhouse gas emissions has moved into implementation with passage of SB 375, landmark legislation requiring the regions to meet state-designated greenhouse gas emissions reduction targets. The CTC has developed guidance on how the regions will develop Sustainable Community Strategies (SCS) in their next RTP cycle; MTC's next RTP is slated for completion in 2013. The SCS will promote strategies to reduce green house gas emissions through more efficient land use patterns, reduce

vehicle travel, support transit, bicycle and pedestrian mode choices, and improve supply and affordability of housing within the Bay Area to reduce commuting into the region.

The *second generation CSMPs* will reflect the SCS and the 2013 RTP, and will grapple with the issue of providing mobility and reducing highway congestion within the context of a new regional planning framework. The s*econd generation CSMP* scope will expand to include integrated land-use and transportation, in the context of Sustainable Community Strategy (SCS) required by SB 375, and a more comprehensive look at transit and non-motorized travel strategies and options.

Stakeholder Issues and Concerns

Through the CSMP development process, stakeholder concerns focused on how non-highway strategies factor into the CSMP analysis scope, SB 375 requirements and how the CSMP recommendations are expected to be used. Stakeholders commented that recommended improvements in the CSMP do not yet emerge from a multi-modal and integrated transportation land use planning effort, such as integrating transit, bicycle and pedestrian networks, and demand management. Stakeholders also noted that the statewide planning policy context has evolved significantly since the CSMP has been developed; the CTC has in its 2010 RTP Guidelines provided guidance on how the regions will develop a SCS in response to SB 375 requirements. In response to questions on how CSMP recommendations will be used, Caltrans noted the role of the CSMP is both as a CMIA funding requirement and as a document informing the transportation planning process. We hope that the results of this collaborative corridor planning effort will help inform future investment choices made through the traditional planning and programming processes. This represents a summary of the issues and concerns shared by stakeholders during the CSMP process.

CSMP Document

The full I-880 CSMP document is organized into three key areas. First is the CSMP Summary, which provides corridor facts and description summaries, as well as key findings and recommended improvements from the technical analysis. The second key area is the main CSMP document, which includes The CSMP Overview, Corridor Description and summaries of the technical analyses. The CSMP technical analyses present existing and future conditions and trends, corridor management issues and strategies, and a prioritized list of short and long term recommendations based on these analyses. The third key area is the Appendices, containing additional corridor information (corridor segment data, freeway agreements, CMIA projects, maintenance plans, and corridor concept) and supporting documents.

The I-880 Corridor system will be monitored using identified performance measures and Traffic Operations Systems (TOS) data and will be reported in subsequent CSMP updates. This information will be used to continually improve system performance. As discussed above, new strategies may emerge as the SCS is implemented to reflect new development and travel patterns that impact the operations of the highway corridor.

I-880 CSMP
EXECUTIVE SUMMARY

This Corridor System Management Plan (CSMP) represents a cooperative commitment to develop a corridor management vision for the I-880 Corridor. The CSMP development process was a joint effort of the California Department of Transportation (Caltrans), the Metropolitan Transportation Commission (MTC), the Alameda County Congestion Management Agency (ACCMA) and the Santa Clara Valley Transportation Authority (VTA). This Core Stakeholder Group worked with local planning agencies, through an Interstate 880 (I-880) Corridor Technical Advisory Committee (TAC) and an I-880 CSMP Working Group to develop this plan. The goal is to propose strategies to achieve the highest mobility benefits to travelers along the I-880 CSMP Corridor.

1. Corridor Management Strategy / Recommended Corridor Improvement Projects

The common theme, and resulting recommended strategy for I-880 is **to implement and enhance advanced / adaptive ramp metering throughout the corridor.** This strategy promises to substantially increase freeway efficiency and throughput. From the I-880 Corridor Management Plan Demonstration report "if implemented correctly, this improvement (ramp metering) will provide the highest benefits relative to its costs." The Central Alameda County Freeway Study ranks adaptive ramp metering as its highest project priority. In Santa Clara County, the Valley Transportation Plan (VTP) 2035 states that I-880 Ramp Metering at various interchanges is an important Freeway Performance Initiative (FPI) project included in VTP 2035. Currently, local traffic-responsive metering has already been implemented to some degree on I-880 in both Alameda and Santa Clara County, and commitments exist to further implement this strategy.

The list of recommended improvements shown in Table ES1 will improve operational efficiency to address issues related to identified performance problems. Figure ES1 illustrates the corridor studies utilized linked to their recommended improvements and existing bottleneck locations.

The large list of interchange improvements and auxiliary lanes will provide a reasonable return on investment, along with delay reductions. It will also be necessary to do additional project-specific analysis to provide more specific benefits assessments through the traditional project development process. In addition, the High Occupancy Vehicle (HOV) extensions funded through the Corridor Mobility Improvement Account (CMIA) program should generate a higher return on investment than expected when an expected increase in ridesharing and transit use takes place.

The full benefit of the CMIA funded projects and the CSMP recommended projects will not be realized without ongoing cooperative system management in the I-880 corridor. The CSMP development process has brought the major transportation planning agencies in the corridor (Caltrans, MTC, ACCMA and VTA) together to develop this set of recommendations. The next step should be a continuous improvement process to work together on corridor management, further incorporation of other modes, and enhanced collaboration to develop the Sustainable Community Strategy (SCS) and Priority Development Areas (PDA) in the corridor. This will provide the foundation for the next generation CSMP and future Regional Transportation Plan (RTP) and FPI updates.

Summary of Recommended Projects in I-880 CSMP Corridor

I-880 Corridor Management Plan Demonstration (ALA 880):	Est. Cost ($M)	Existing Commitment to Implement (note 1)
Short Range Recommended (2012)		
Advanced Ramp Metering	25.0	X
Advanced Traveler Information	(note 2)	X
Long Term Planned (2013-2020)		
TCIF Project (Inc. 23rd and 29th St. Overcrossings)	85.0	
SB HOV Extension from Hegenberger Rd. to Marina Blvd. (CMIA Project)	108.0	
Central County Freeway Study LATIP (I-880 only, in order of priority):	**(note 3)**	
ICM / Adaptive Ramp Metering	32.5	X
I-880 Aux. Lanes, Paseo Grande to Winton Avenue *	32.5	
I-880 Aux. Lanes, Whipple Rd. to Industrial Pkwy. West *	19.5	
I-880 Industrial Pkwy. Interchange	41.0	
I-880 Davis St. Interchange	11.1	
I-880 Marina Blvd. Interchange	24.4	
I-880 / Whipple Road Interchange *	13.5	
I-880 / West A Street Interchange *	27.0	
I-880 / West Winton Avenue Interchange *	25.0	
Extend Northbound HOV Lane	155.5	
I-880 / Washington Interchange	31.0	
SR-84 Study LATIP (I-880 only, in order of priority):	**(note 3)**	
I-880 / Mission Blvd. Interchange Completion (CMIA project candidate)	42.4	
I-880 Aux. Lanes, Dixon Landing to Alvarado-Niles	5.0	
ICM / TOS, I-880 South of SR-92	10.0	X
Valley Transportation Plan 2035 (I-880 only):		
I-880 HOT Lanes, ALA County Line to US-101	20.0	
I-880 / Montague Expressway Interchange Improvement	12.0	
I-880 / I-280 / Stevens Creek Blvd. Interchange Improvement (CMIA Project)	64.0	
I-880 Widening for HOV Lanes, SR-237 to Old Bayshore (CMIA Project)	95.0	X
I-880 NB Aux. Lane, Coleman Ave. to First St.	13.0	
I-880 Ramp Metering, Various Interchanges (FPI)	(note 4)	X
Valley Transportation Authority I-880 Corridor Study:		
Near-Term Projects		
NB Stevens Creek Interchange Reconfiguration	(note 5)	
SB Stevens Creek Interchange Reconfiguration		
Long-Term Improvements		
NB I-280 to NB I-880 Direct Connector	(note 5)	
I-880 HOV Lane Extension, US-101 to I-280	150.0	

** Also listed in I-880 Corridor Management Plan Demonstration*

Table ES1. Short and Long Term Recommended Projects in I-880 CSMP Corridor.

Note 1) Existing Commitment to Implement is defined a programmed project or similar funding commitment.
Note 2) Advanced Traveler Information considered 511, Travel Times on CMS, and other emerging technologies.
Note 3) LATIP projects are listed with current estimated funding need, not necessarily total cost.
Note 4) Estimated cost for SCL 880 Ramp Metering (capital and operating) not precisely quantified in VTP2035; costs often included as part of larger capital projects.
Note 5) Cost included as part of 880/280/Stevens Creek project in VTP2035.

I-880 Corridor Analyses with Recommended Projects and Existing Bottlenecks

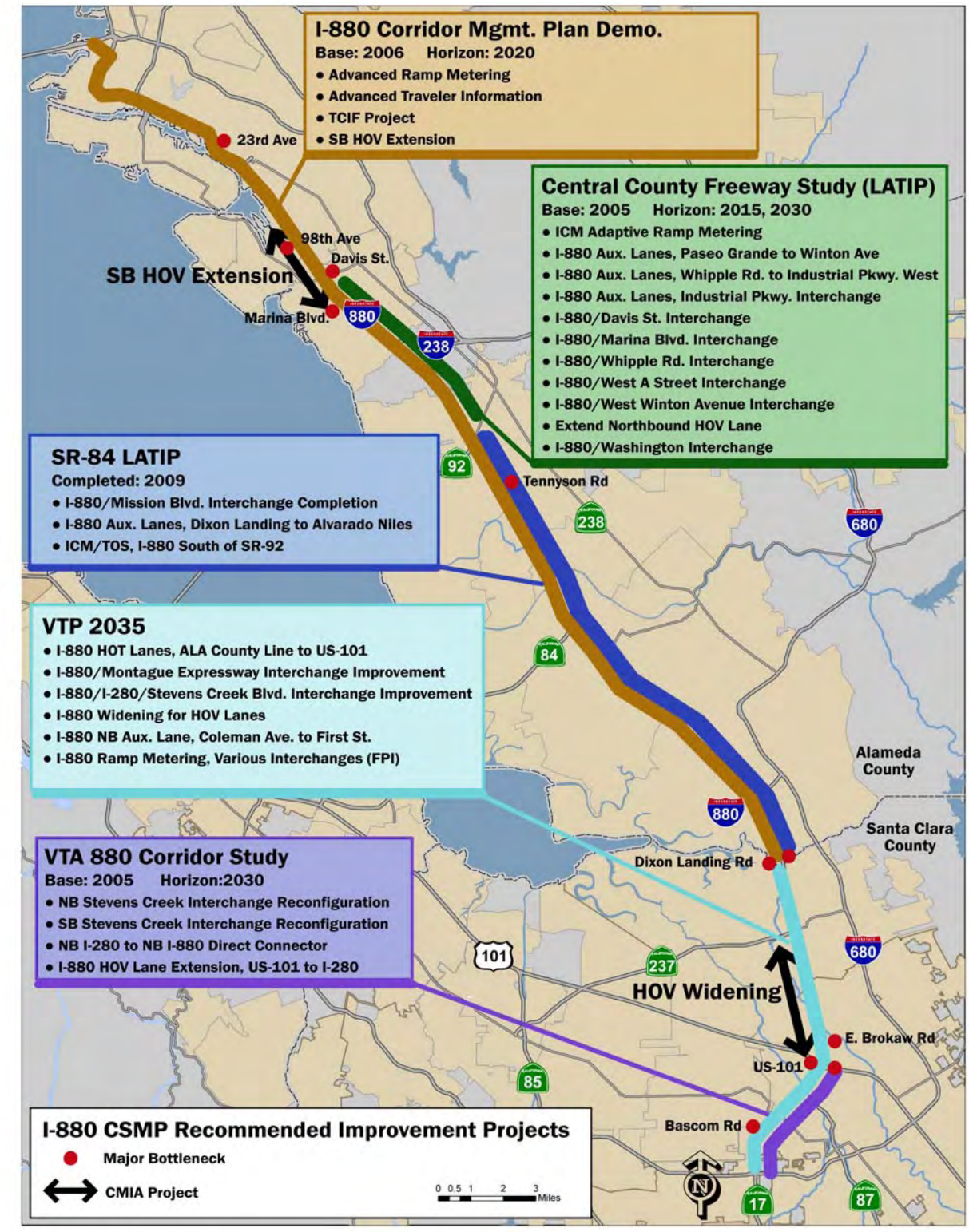


Figure ES1. I-880 Corridor Analyses with Recommended Projects and Existing Bottlenecks.

2. Areas for Further Study

Despite expected corridor performance improvements (should all of the recommended projects and strategies be implemented), some performance problems are expected to continue in the future. The following areas deserve additional study to determine how they would impact corridor performance over and above the CMIA funded projects and CSMP recommended improvements:

- ***Goods Movement*** **-** The high significance of truck traffic on the I-880 corridor requires continual study and monitoring of this vital activity. Of particular interest will be monitoring the effect on corridor mobility by constructing the recommended Trade Corridor Improvement Fund (TCIF) project. Both the Regional Goods Movement Study (2004) and the statewide Goods Movement Action Plan (2007) provide guidance for immediate and future actions related to goods movement efficiency and environmental improvement.

- ***High Occupancy Toll (HOT)/Express Lanes*** **-** MTC's 2009 RTP proposes a Regional Express Lane Network for the Bay Area, which includes Express Lanes on I-880 corridor. Should enabling legislation be signed into law at some point in the future, significant further analysis and consultation with jurisdictions along the corridor will be required to determine the feasibility, cost-effectiveness and appropriateness of converting the HOV lanes to Express Lanes.

- ***I-880 / US-101 Interchange Enhancements*** **-** Improvements to this interchange have been analyzed as part of previous studies, as it is consistently identified as a controlling bottleneck both now and in the future with CSMP recommended improvements. While significant benefits may be achieved through improvements to this major interchange, costs and right-of-way impacts were found to be prohibitive. Additional study will be required to identify feasible solutions.

- ***Bay Area Rapid Transit (BART) Extension to San Jose*** **-** BART's Silicon Valley extension will begin south of the future BART Warm Springs Station in Fremont and proceed alongside the Union Pacific Railroad (UPRR) through Milpitas to San Jose and Santa Clara. The project's purpose is to improve transit service in the Silicon Valley corridor to address growth in corridor travel over the next twenty years. Specific benefits to I-880 include a reduction in travel demand, vehicle miles traveled, improved transit travel times, and a reduction in emissions. Future corridor planning efforts should review opportunities for this transit project to integrate with the broader transportation network.

- ***California High-Speed Rail (CHSR)*** - When this project is built, high speed trains capable of 220 MPH will link San Francisco and Los Angeles in two and one half hours. The planned system would also serve Sacramento, San Jose, Fresno, Bakersfield, Anaheim, Riverside and San Diego. When CHSR is completed and linked to BART, Altamont Commuter Express (ACE) and the VTA light rail system in San Jose, the impact on I-880 should be a reduction in travel demand, coupled with related benefits. Future corridor planning efforts should review integration opportunities of CHSR among the elements of the larger transportation network.

3. I-880 CSMP Corridor Facts

Corridor Limits: I-880 at the I-880/I-280 I/C in Santa Clara County to the I-880/7th Street Exit in Oakland

Corridor Description:

The Interstate 880 Corridor as defined for this Corridor System Management Plan (CSMP) is approximately 42 miles long, beginning at the I-280 interchange in Campbell, and ending in the north at 7th Street in Oakland near the San Francisco-Oakland Bay Bridge approaches. This Corridor is an urban freeway that intersects State Routes 61, 82, 84, 87, 92, 237, 262, US-101, I-238, I-580 and I-980. The existing facility ranges from four to ten mixed flow lanes with bidirectional High Occupancy Vehicle (HOV) lanes in certain segments. There is a robust network of transit services and parallel arterial routes.

Route Designation & Regional Setting:

Functional Classification	Urban Principal Arterial – Freeway
Trucking Designations	STAA Route: Yes Terminal Access Route: Yes SHELL Route: No
Other Designations	Interstate Highway
Interregional Road System	No
Life Line	No
Metropolitan Planning Organization (MPO)	Metropolitan Transportation Commission (MTC)
Air Quality District	Bay Area Air Quality Management District
Commuting Mode Split (City averages)	69% SOV, 11% Rideshare, 11% Transit, 3% Walk, 3% Bike, 3% Other Means

(Mode Split Source: American Community Survey 2007)

Multimodal Service:

Primary bus and rail providers are Alameda-Contra Costa (AC) Transit, Altamont Commuter Express (ACE), Amtrak *Capitol Corridor*, Bay Area Rapid Transit (BART), and the Santa Clara Valley Transportation Authority (VTA).

Interregional Significance:

Interstate 880 connects the San Francisco-Oakland Bay Bridge with Silicon Valley, serving Port of Oakland, Oakland International Airport, Mineta International Airport in San José, and about ten east Bay Area cities. I-880 also provides a critical link for the movement of goods between the Central Valley and Port of Oakland through its connection to the I-580 corridor at the I-238/880 interchange. The corridor is also a major commuter link between major employment centers in Silicon Valley and East Bay.

Corridor Specific Issues:

- Key international trade corridor (Port of Oakland and commercial airports in Oakland & San José)
- Regionally highest 5-axle truck volume
- Commuter link between major employment centers in Silicon Valley/East Bay.
- Urban freeway with corridor-wide traffic generators: event/retail venues, industry and residential areas
- Connects Central Business Districts for two of the largest cities in California at each end
- Transbay traffic collector from three bridges: the Bay (I-80), San Mateo (SR-92), and Dumbarton (SR-84)

Current Performance:

Top Three Congested Locations (2008)

Time/Direction/Location	*VHD*
PM: North – Decoto Road to Tennyson Road	1,990
AM: South –Marina Blvd. to south of Industrial Parkway	1,760
PM: North – Route 237 to south of Auto Mall Parkway	1,410

Bottlenecks and Congestion Queues on I-880 Corridor

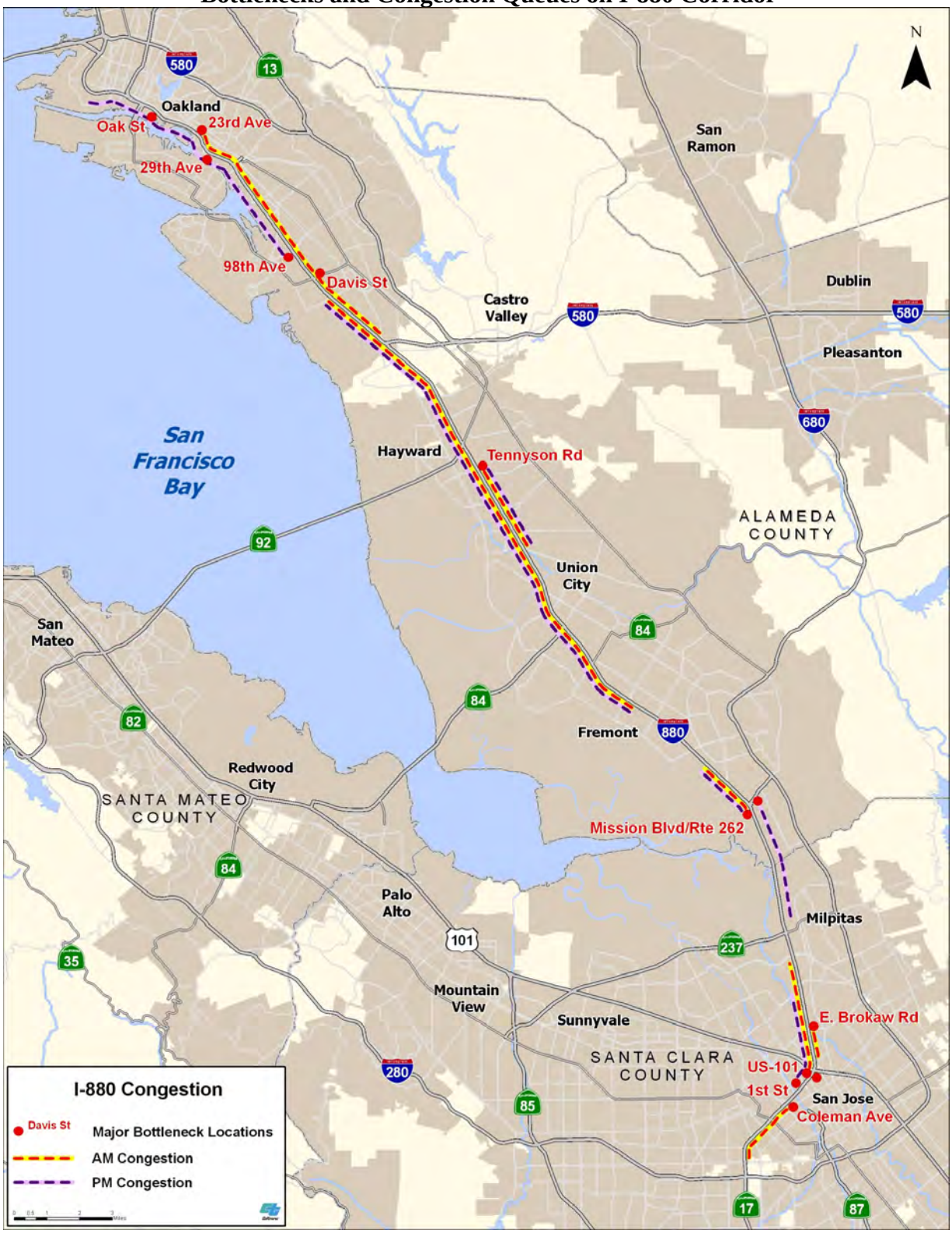


Figure ES2. Bottlenecks and Congestion Queues on I-880 Corridor (2004-07).

ALAMEDA County Transportation Commission
ACCMA ▪ 1333 Broadway, Suite 220 ▪ Oakland, CA 94612 ▪ PH: (510) 836-2560
ACTIA ▪ 1333 Broadway, Suite 300 ▪ Oakland, CA 94612 ▪ PH: (510) 893-3347
www.AlamedaCTC.org

Memorandum

DATE: August 24, 2010

TO: Planning, Policy and Legislation Committee

FROM: Diane Stark, Senior Transportation Planner

SUBJECT: **Approval of Transportation and Land Use Program: Revised Priority Development Area (PDA) Reporting**

Recommendation:
It is recommended that the Commission approve the revised quarterly progress and fund monitoring reports for Alameda County Priority Development Areas (PDAs) (formerly referred to as Transit Oriented Developments (TODs)). The changes would add quarterly monitoring of the progress of up to 35 Priority Development Area (PDA) projects, which are active and included in the Countywide Transportation Plan (CWTP), and for which jurisdictions are able to provide updates. It would also include monitoring programmed funds for PDA projects that are funded through the Transportation for Livable Communities (TLC) Program.

Summary:
Staff is recommending expanding quarterly reporting of Priority Development Area projects to the Commission to include up to 35 PDAs in the CWTP that are active and for which the jurisdictions are willing to provide quarterly updates. Updates would include whether any progress has occurred in planning, permits, environmental review, funding or construction. Updates would require input from the project sponsors.

It is also recommended that staff provide quarterly fund monitoring reports to the Commission reporting on PDAs that receive funding through Alameda CTC and MTC's Transportation for Livable Communities (TLC) Program. Presently, this includes the following projects: 1) Oakland Coliseum, 2) West Oakland BART, 3) MacArthur BART, 4) Fruitvale District Foothill Boulevard Streetscape Improvements, Oakland, 5) Livermore Iron Horse trail connection to Railroad Avenue/Livermore Avenue, 6) Livermore retrofit of downtown light fixtures, 7) Downtown Berkeley BART, 8) Fremont Midtown Catalyst, 9)San Leandro BART pedestrian interface, 10) Union City, and 11) Ashby/Ed Roberts, Berkeley. This list would be adjusted as projects are completed or as additional PDAs receive TLC funding. Staff will also continue to work directly with PDA project sponsors, as needed, to help ensure funding obligations are understood and met in a timely fashion to advance PDA projects in Alameda County.

Background:
Thirty-five Priority Development Areas, where high density development is planned within easy access to transit hubs, are among the transportation investments identified in the 2008 CWTP, and further supported within Measure B Expenditure funds.

PDAs are included in the Countywide Transportation Plan as a means of identifying transportation investments that encourage new or infill development with access to transit. Encouraging connections between land use and transportation is a way to reduce traffic congestion, vehicle miles traveled and air emissions. Reducing greenhouse gas emissions is one of the CWTP goals, which is responsive to the State's Climate Action Legislation (SB 375 and AB 32).

The Association of Bay Area Governments (ABAG) designated areas in Alameda County as PDAs based on a review of applications from jurisdictions. PDAs are areas within existing developed communities, near existing or planned fixed transit (i.e., rail or ferry) or comparable bus service, which have plans to add more housing. PDAs are a more comprehensive way of defining Transit Oriented Developments (TODs).

Staff has been submitting quarterly reports to the ACCMA Board since 2005 to provide updates on funding, plans and development of the eight TOD sites in the 2004 CWTP, and an additional two active TODs (South Hayward and Fruitvale Phase II), as requested by Hayward and Oakland. Together, the TOD projects that have been monitored are located at the following BART stations: MacArthur, W. Oakland, Oakland Coliseum, Ashby/Ed Roberts Campus, Dublin/Pleasanton, San Leandro, Union City, Warm Springs, South Hayward and Fruitvale Phase II. With the adoption of the 2008 Countywide Transportation Plan, the TODs were replaced by 35 planned and potential Priority Development Areas (PDAs). (See Attachment A, listing Alameda County PDAs). Of these sites, the City of Berkeley did not submit a PDA application for Ashby/Ed Roberts Campus because it is under construction. The City of Fremont is in the process of completing a PDA application for Warm Springs.

Of the 35 PDAs in the current Countywide Transportation Plan, 24 are designated as "planned," one is partially planned and partially potential, and the remainder are "potential". (See Attachment A, list of planned and potential PDAs in Alameda County.) Those that are planned have completed a local planning process and are closer to being ready to go forward with development than those designated as potential PDAs. Attachment A includes a comparison of the PDAs in the CWTP with the TOD projects that were the subject of previous quarterly update reports.

Fund Monitoring
Since 2005, staff has been monitoring funds that pass through ACCMA for the following TODs: MacArthur, Coliseum, West Oakland, San Leandro, Union City, Dublin/Pleasanton (project and monitoring completed), Ashby/Ed Roberts, and Warm Springs. Two of these projects are not being monitored now because they are complete (Dublin/Pleasanton) or in planning (Warm Springs). Monitoring funds has been a way to help provide information to jurisdictions to assist them in meeting deadlines to ensure that funding for the projects remain intact. It also assists jurisdictions in advancing projects that have a mixture of fund sources and required activities related to the programming, allocation and expenditure of transportation funding at TOD sites. The monitoring

system provides adequate lead time for sponsors to react and ensure that the required activities are performed in time to meet funding deadlines and programming of project funding.

In addition to quarterly reports to the ACCMA, fund monitoring has included staff facilitating meetings with cities, transit operators and public or private partners, to ensure funding obligations are met. This has included collaborating to meet funding requirements for the Ashby/Ed Roberts Campus, which is now under construction, and Coliseum BART plaza improvements, which are now in design.

The success of the TOD fund monitoring system has depended, in large part, on the cooperation of project sponsors in providing project information. Project sponsors have provided comprehensive cost/funding plan for the projects showing the total costs and funding detailed by phase. They also provided programming information, such as fund source, year programmed, and amount, for all funding.

Fiscal Impact:
The cost of providing quarterly fund monitoring of PDAs with approved TLC funding would be $20,000 per year. This would be funded by MTC's Transportation and Land Use (T Plus) Program within the existing budget. The cost of providing additional assistance to facilitate allocating funds would be included as staff time for the MTC TPlus Work Program.

Attachments:
Attachment A: Priority Development Areas (PDAs) and Transit Oriented Developments (TODs) in Alameda County

This page intentionally left blank

Priority Development Areas (PDAs) and Transit Oriented Developments (TODs), Alameda County

1.	Alameda County: *Urban Unincorporated Area*	Potential
2.	City of Alameda: *Alameda Naval Air Station*	Planned/Potential[1]
3.	City of Berkeley: *Adeline Street*	Potential
4.	City of Berkeley: *Downtown*	Planned
5.	City of Berkeley: *San Pablo Avenue*	Planned
6.	City of Berkeley: *South Shattuck*	Planned
7.	City of Berkeley: *Telegraph Avenue*	Potential
8.	City of Berkeley: *University Avenue*	Planned
9.	**City of Berkeley: Ashby/Ed Roberts Campus**	**Under Construction[2]**
10.	**City of Dublin: *Transit Center***	Planned
11.	City of Dublin: *Town Center*	Planned
12.	City of Dublin: *West Dublin BART Station*	Planned
13.	City of Emeryville: *Mixed Use Core*	Planned
14.	City of Fremont: *Centerville*	Planned
15.	City of Fremont: *Central Business District*	Planned
16.	City of Fremont: *Irvington District*	Planned
17.	**City of Fremont: *Warm Springs***	**Being Planned[3]**
18.	City of Hayward: *Downtown*	Planned
19.	**City of Hayward: *South Hayward BART Station*[4]**	Planned
20.	City of Hayward: *The Cannery*	Planned
21.	City of Livermore: *Downtown*	Planned
22.	City of Newark: *Dumbarton Transit Area*	Potential
23.	City of Newark: *Old Town*	Potential
24.	**City of Oakland: *Coliseum BART Station Area***	Planned
25.	City of Oakland: *Downtown and Jack London Square*	Planned
26.	City of Oakland: *Eastmont Town Center*	Planned
27.	City of Oakland: *Fruitvale/Dimond Areas*	Planned
28.	**City of Oakland: *MacArthur Transit Village***	Planned
29.	City of Oakland: *TOD Corridors*	Potential
30.	**City of Oakland: *West Oakland***	Planned
31.	City of Pleasanton: *Hacienda*	Potential
32.	City of San Leandro: *Bay Fair BART Transit Village*	Potential
33.	City of San Leandro: *Downtown*	Planned
34.	**City of San Leandro: *East 14th Street***	Planned
35.	**City of Union City: *Intermodal Station District***	Planned

[1] Part of the Alameda Naval Air Station PDA has an adopted land use plan, part is undergoing planning.
[2] Ashby/Ed Roberts Campus is a TOD that is under construction;therefore a PDA application is not needed.
[3] The City of Fremont is anticipated to submit a PDA application for the Warm Springs site in the near future.
[4] **Bold** indicates Transit Oriented Developments (TODs) in the 2004 Countywide Transportation Plan.

This page intentionally left blank

ALAMEDA County Transportation Commission
ACCMA ▪ 1333 Broadway, Suite 220 ▪ Oakland, CA 94612 ▪ PH: (510) 836-2560
ACTIA ▪ 1333 Broadway, Suite 300 ▪ Oakland, CA 94612 ▪ PH: (510) 893-3347
www.AlamedaCTC.org

Memorandum

DATE: August 25, 2010

TO: Planning, Policy and Legislation Committee

FROM: Tess Lengyel, Programs and Public Affairs Manager

SUBJECT: Legislative Program Update

Recommendations:
This is an information item only.

Summary:

State Update

California's legislative session ends on August 31, 2010. At the time of this writing, a state budget still has not been passed. While the state grapples with a severe budget shortfall, final compromise efforts have continued with legislative leadership and the Governor, and anticipated action on the budget is expected by the 31st.

The attached memo from Suter, Wallauch, Corbett & Associates provides summary information on the budget.

Federal Update
On the federal side, it has been anticipated that the Senate Environment and Public Works (EPW) Committee may release a markup of the transportation bill by early fall; however, due to the absence of a funding mechanism for the bill, it may be that a bill will not be ready by the current expiration date of December 31, 2010.

On August 26, 2010, the House Transportation and Infrastructure Committee released a report on the implementation status of the American Recovery and Reinvestment Act of 2009 Transportation and Infrastructure Provisions, as of August 13, 2010. Key highlights include:

- $35.1 billion of the $38 billion available for highway, transit, and wastewater infrastructure formula program projects under the Recovery Act, or 93 percent of the available funds, has been put out to bid on 19,037 projects.
- Within this total, 18,473 projects, totaling $34.1 billion or 90 percent, are under contract.
- Work has begun on 17,820 of these projects, totaling $33.3 billion, and work has been completed on 7,889 of these projects, totaling $6.3 billion.
- Over 1 million jobs have been created in the transportation industry, including direct, indirect and induced.

The report can be found at
http://transportation.house.gov/Media/file/ARRA/20100826/Recovery%20Act%208-26-10%20Report.pdf

Fiscal Impacts:
No direct fiscal impact.

Attachments:
Attachment A - State Update
Attachment B - Federal Updates

Suter▪Wallauch▪Corbett
& Associates
Government Relations

August 27, 2010

TO: Christine Monsen, Executive Director
Alameda County Transportation Improvement Authority

Dennis Fay, Executive Director
Alameda County Congestion Management Agency

FR: Suter, Wallauch, Corbett & Associates

RE: Legislative Update

While we don't know what occurred in the Big Five meeting last week, it is crystal clear that the Legislature doesn't want to leave town without at least putting a budget up for a vote.

The last day of session is Tuesday, August 31st, and Senator Steinberg has announced plans to put both the Governor's May Revise proposal and the Dem's revised Jobs Budget up for a vote. The incoming Republican leader, Senator Bob Dutton quickly dismissed Tuesday's vote as a drill calling it an exercise in futility.

Budget staffers have been admonished to get all their trailer bill language into Legislative Counsel last week, so a budget bill can be ready to go by Tuesday. A REAL budget vote--a successful one--would be a welcome surprise that would also give legislators the ability to proclaim success on the fiscal front before heading into the serious fall campaign season. However, the only realistic expectation is for the Governor to call a special session on the budget on September 1st.

Budget Rumors: While not part of any budget deal yet, we are hearing rumors of a new transportation funding effort. As you may recall, there was an effort to include in the March budget a measure that would allow metropolitan planning organizations to place a fuel fee on the ballot. This revenue would be used to achieve the vehicle miles traveled reduction goals being set via SB 375. In particular this revenue would be used for transit operations and capital. This regional fuel fee is being revived. In addition, there are rumors of another fee proposal that would involve the CTC in an effort to fund highway projects. Details on this proposal are currently nonexistent, but we will forward them if they begin to emerge.

IOUs: State Controller John Chiang announced that he would begin issuing IOUs by mid-September to avoid running out of cash in October. IOUs could be issued for goods and services provided to the state, tax refunds, Cal Grants, and the State portion of some social services programs. Counties would not receive the State portion of CalWORKs grants, drug and alcohol programs, or mental health programs.

Unlike last year, the State can't blame IOUs on a revenue shortage, it stems solely from the lack of a budget. Budget passage would allow the Controller to sell Revenue Anticipation Notes to sustain cash reserves through the fiscal year, as is done annually.

Furloughs: In a victory for the Governor, the California Supreme Court gave him the authority to furlough state workers for 3 days a month while the court reviews whether he has the authority to do so. The Governor estimates that the furloughs affecting 150,000 state workers save the State $150 million a month.

State Controller's Office: State Controller John Chiang released his monthly report stating that July's revenues were below the Governor's May Revision estimates by $91 million, or 1.9 percent. Chiang again urged passage of a budget to address the coming cash shortage. His report stated the following:

- The Legislature passed and the Governor signed a series of scheduled payment deferrals earlier this year. That legislation calls for an October education deferral to be accelerated into September if necessary to maintain the State's cash flow. When that payment is deferred in September, the State is projected to maintain safe cash levels into October.
- Yet without a balanced budget that allows the State to begin its regular cash-flow borrowing, the State may still have to take extreme measures to manage cash, including IOUs, by late August or early September.
- Personal income tax revenues were $210 million (-6.6%) below estimates. Corporate taxes were up $86 million (37.4%), and sales taxes came in $69 million (6.6%) above estimates.
- Expenditures were running $963 million ahead of estimates through July 31. The State's $13.7 billion cash deficit is being covered entirely by internal borrowing.

City of Bell Fallout: During the past few weeks a package of bills has emerged in response to revelations that Bell city officials received compensation packages exceeding $1 million per year, and the City Council received a salary of $100,000 for part time work. These measures will add to the administrative burden to comply with these requirements. The main organizations, such as CSAC and the League of Cities, are proposing clarifying amendments but they are not taking a support of oppose positions on most of these measures. The following bills have been amended so far:

AB 1955 (De La Torre): This measure would require charter and general law cities to be penalized by the state if they pay city council salaries higher than allowed in general-law cities. Pay in excess of the amount specified in statute would be slapped with a 50 percent personal income tax and the city's redevelopment agency would be restricted from approving new plans or issuing new debt. This would not apply to a charter city if the city council salaries are adopted by ordinance or approved by the voters as part of a charter amendment. The League of Cities has sent an oppose letter arguing that this bill unconstitutional in how it infringes on charter city authority

AB 827 (De La Torre): This bill would target the benefit packages of "excluded employees." Excluded employees are generally defined as a non-union employee that report directly to the legislative body, and includes persons who are contracted with the local agency or an at will employee. This bill would prohibit an employment contract from containing automatic salary increases in excess of a COLA, automatic renewals and banning severance payments of greater than 12 months' salary. In addition, AB 827 would require any raise in excess of a COLA to be adopted at a public meeting and must be accompanied by a perfomance review. The performance review would be available for public review.

AB 2064 (Huber): Require the Legislature and any city, county, special district, school district and joint powers authority to post on its Web site the salaries of its elected members or appointed officials and specified employees. The spcified employees include city management, general manager, county administrator and "other similar chief administrative officer or executive officer." There are reports that this bill is being held-up by "prcedural politcs" in the Senate. Others think it is because the bill applies to the Legislature.

SB 501 (Correa): Require officials of cities, counties, special districts, school districts and joint powers agencies to file an annual statement that discloses their compensation to the public. This would basically apply to any person who is currently required to submit a Form 700. Specifically, the bill directs the Secretary of State to develop a form to disclose total compensation. The bill currently defines compensation as including salaries and stipends paid, expense reimbusements, the employer's cost for benefits, and any other monetary or nonmontary perquisites provided.

AB 194 (Torrico) : This bill provides that pensions shall not exceed 125% of the salary recommended by the California Citizens Copensation Commission for the Governor on Deceber 2009. These provisions would apply to all new hires on or after January 1, 2011.

This page intentionally left blank

LEGISLATION
August 30, 2010

August 31st is the last day of session. Any bill not sent to the Governor for consideration by midnight Tuesday is dead. However, since there is no budget this end of session deadline may have some wiggle room. The Governor has until the end of September to sign and veto any bill sent to his office during the final weeks of session.

Bills	Subject	Status	Client - Position
AB 1760 (Blumenfield)(D) Design-sequencing contracts.	This bill is moving through the Senate with no opposition. AB 1760 would reenact until January 1, 2016 the authorization for Caltrans to enter into design-sequencing contracts. AB 1760 would allow Caltrans to enter an unlimited number of design sequencing contracts. The bill would require a report to the Legislature describing and evaluating the outcome of the contracts undertaken pursuant to these provisions.	Enrollment – Governor's Desk	ACTIA- Watch ACCMA- Watch
AB 1955 (De La Torre) Public officers: incompatible offices.	Both ACTIA and the ACCMA adopted an oppose position on AB 1955 when it proposed to add confusing examples of when offices are considered incompatible. In response to the City of Bell scandal, AB 1955 was gutted and amended to place restrictions on the salaries paid to city council members and impose penalties if the salaries exceed the specified caps. However, the penalties would not be imposed if the salaries are adopted by an ordinance or through a voter approved charter amendment. Since AB 1955 only applies to cities, and the prior content of the bill has been removed, both Agencies should consider changing its position from Oppose to Watch.	SENATE FLOOR	ACTIA-OPPOSE ACCMA-OPPOSE Prior Version

AB 2147 (V. Manuel Perez) (D) Safe Routes to School Construction Program.	Under existing law Caltrans awards Safe Routes to School grants to local governments based on six specified factors. These factors range from demonstration of need and the potential to increasing bicycling or walking to school to demonstrated support for the project from schools and elected officials. AB 2147 would add to the list of factors consideration of the public participation process used to select the project and if the project benefits a disadvantaged community AB 2147 was amended at the Senate Transportation & Housing Committee to replace the definition of a "disadvantage community" with a definition of a low-income school. The bill defines a Low-income school as a school in which 75% or more of the students qualify for the federal free or reduced lunch program.	Enrollment – Governor's Desk.	ACTIA-Support ACCMA-Support
AB 2703 **(John A. Perez)(D)** Bond Funded Projects: LONP	AB 2703 was gutted and amended to establish a process for issuing a letter of no prejudice for projects funded by the $950 million in bonds dedicated to local and regional rail operators in the High Speed Rail Bond.	SENATE RULES	ACTIA-Watch ACCMA-Watch
SB 82 (**Hancock**)(D) Community colleges: parking and transportation fees	SB 82 raises the cap from $60 per semester to $70 per semester that can be imposed for transportation services by community college districts. The bill also includes language stating the total fees shall not exceed the amount necessary to reimburse the district in providing the transportation services, and would allow the governing board of the district to annually increase the fee to cover inflation.	Enrollment – Governor's Desk.	ACTIA-Watch ACCMA-Watch

SB 1061 (**Hancock**) (D) San Francisco-Oakland Bay Bridge: capital projects.	SB 1061 authorizes the Bay Area Toll Authority to spend future bridge toll revenue on the construction of a bicycle-pedestrian-maintenance pathway on the western portion of the Bay Bridge. It would also authorize MTC to be the project sponsor. SB 1061 was amended to require the project to be included in the regional transportation plan. Language was also added to specify that the path may include capacity for maintenance vehicles if the path does not interfere with the height requirements for the shipping lane. In addition, language was added that prohibits BATA from increasing tolls specifically to fund this project.	ASSEMBLY APPR.— Held on Suspense File -- DEAD	ACTIA-Watch ACCMA-Watch
SB 1215 **(Price)(D)** architectural and engineering services: prequalification lists.	SB 1215 would create a pilot project that would authorize Caltrans to establish prequalified lists of small, medium and large architectural and engineering firms. The pilot project would sunset on January 1, 2014. This bill failed passage in the Assembly Committee on Transportation. This bill seeks to enable small businesses to compete for Caltrans engineering contracts by allowing Caltrans the ability to establish prequalification lists of architectural and engineering firms for small, medium, and large contracts. These prequalification lists would be created for each Caltrans district.	ASSEMBLY TRANSP. -- DEAD	ACTIA-Support ACCMA-Watch
SB 1268 (**Simitian**) (D) electronic toll collection mechanisms: disclosure of personal information.	SB 1268 would enact privacy protections for the use of electronic toll collection devices. SB 1268 would prohibit a transportation agency from selling or providing personally identifiable information of a subscriber. The bill would allow a transportation agency to store certain personally identifiable information of a subscriber and would require it to discard other information within a designated time period. Under this bill the data must be purged not sooner than four years, and not later than four years and six months, after the	Enrollment – Governor's Desk	ACTIA-Watch ACCMA-Watch

	closing of an account. In addition, the author also agreed to clarify that the provision requiring subscribers to "opt in" by giving written consent to receive written communications from the agency is prospective only.		
SB 1318 (Committee on Transportation and Housing) Transportation	SB 1318 was unanimously approved as a consent items in the Assembly Appropriations Committee last week. SB 1318 is the Senate Transportation & Housing Committee's Omnibus bill, which contains various non-controversial changes. This bill was amended on June 3, to change various references to the ACCMA or ACTA/ACTIA to the Alameda County Transportation Commission (ACTC).	Enrollment – Governor's Desk	ACTIA-Support ACCMA-Support
SB 1348 (**Steinberg**) (D) California Transportation Commission:	SB 1348 would enact a procedure for the California Transportation Commission (CTC) to follow when developing program guidelines. The purpose is to establish a structured and public process for the CTC to follow when developing and adopting guidelines.	Enrollment – Governor's Desk	ACTIA-Watch ACCMA-Support
SB 1371 (**Correa**) (D) Bond Funded Projects: LONP	SB 1371 was gutted and amended to include provisions similar to AB 2703. The bill creates a process for issuing a letter of no prejudice (LONP) for projects funded by the $950 million in bond funds dedicated to local and regional rail operators in the High Speed Rail Bond Act.	ASSEMBLY FLOOR	ACTIA-Watch ACCMA-Watch
SB 1445 (DeSaulnier)(D) Planning	SB 1445 has been gutted and amended. Originally, SB 1445 proposed to impose statewide a vehicle fee of $2. The revenue would be allocated to MPOs to fund SB 375 implementation. As amended, the intent of the bill stays the same but the funding mechanism changes. SB 1445 would authorize an MPO to place on the ballot a vehicle fee of up to $4. The revenue would be	ASSEMBLY APPR	ACTIA-Support ACCMA-Support

	used to for regional planning activities primarily related to implementing SB 375. In the Bay Area the funds would be split between MTC and ABAG. Also consistent with prior versions, if the fee amount exceeds $2 then the amount collected above $2 must be made available as grants to cities, counties, and congestion management agencies. The bill, however, does contain language that would allow MTC and ABAG to use any TDA funds to reimburse counties for the cost of the election if the fee measure fails. The language does not specify which pot of TDA funds they can use. We are working with the author and ABAG on a letter to the Senate Journal to clarify that the intended source is the regional entities share of TDA funds, which are used for planning, and they should not use transit operating or bicycles and pedestrian funds.		

This page intentionally left blank

SIMON AND COMPANY
INCORPORATED

Washington Friday Report

Volume XII, Issue 34 August 27, 2010

INSIDE THIS WEEK

Amid troubling economic news, it was "roll-out" week in Washington this week with both grants and policy announcements leading the way – the long-awaited Choice Neighborhoods and a new round of brownfields, plus some interesting reports on wireless and housing finance certain to be factors in big fall debates. Here are the highlights!

HUD Choice Neighborhoods and HOPE VI Grants

HUD's Office of Public and Indian Housing announced the availability of $189 million in grants to transform public and assisted housing and to revitalize communities. There will be approximately $124 million in *FY10 HOPE VI Revitalization Program* grants and $65 million for the *Choice Neighborhoods Pilot Grant*s. The deadline for the Choice Neighborhoods Planning or Implementation grants is October 26, 2010. The application deadline for the HOPE VI Revitalization Grant is November 22, 2010.

The Choice Neighborhoods program represents a major initiative of both HUD and the White House. Last year, the Administration proposed elimination the HOPE VI program and replacing it entirely with Choice Neighborhoods. The FY10 appropriations process rejected that wholesale approach, opting instead to keep both programs going by designating an overall amount for these two programs and then giving one-third of the funding to Choice Neighborhoods and two-thirds to HOPE VI. This debate will play out again as Congress works to finalize the FY11 appropriations for HUD, probably after the November elections – we'll keep you updated on that.

The $65 million Choice Neighborhoods pilot expands HOPE VI's redevelopment toolkit to allow for redevelopment of both public and other HUD-assisted housing properties. This means that the disinvested assisted housing that frustrated cities and housing authorities and fostered crime and blight can now be included in comprehensive neighborhood revitalization efforts. HUD will award two types of grants for the Choice Neighborhoods Initiative: Planning Grants and Implementation Grants. 1) Planning Grants will enable those communities that are not yet able to fully undertake a successful neighborhood transformation to build the capacity to do so, with the Federal government supporting their endeavors and incentivizing local support; and 2) Implementation Grants will provide a significant amount of Federal support to those communities that have undergone a comprehensive local planning process and are ready to implement.

The purpose of HOPE VI Revitalization grants is to assist Public Housing Authorities to: 1) Improve the living environment for public housing residents of severely distressed public housing projects through the demolition, rehabilitation, reconfiguration, or replacement of obsolete public housing projects (or portions thereof); 2) Revitalize sites (including remaining public housing dwelling units) on which such public housing projects are located and contribute to the improvement of the surrounding neighborhood; 3) Provide housing that will avoid or decrease the concentration of very low-income families; and 4) Build sustainable communities. *We have included the release for your review and sent additional information to many of you individually.*

EPA Brownfield Grants

EPA released the proposed guidelines for Assessment Grants, Revolving Loan Fund and Clean-Up Grants under the *Small Business Liability Relief and Brownfields Revitalization Act*. The total funding available is estimated at $92.9 million. EPA must expend 25 percent of the amount appropriated for brownfields grants on sites contaminated with petroleum. EPA anticipates awarding an estimated 343 grants among all three grant types**.** *Proposals are due October 15, 2010.*

EPA anticipates awarding 185 assessment grants for an estimated $52.4 million. The Assessment Grant Program provides funds to inventory, characterize, assess, and conduct planning (including cleanup planning) and community involvement related to brownfield sites. Assessment grants for individual applicants can be either community-wide or site-specific. Community-wide proposals are appropriate when a specific site is not identified and the applicant plans to spend grant funds on more than one brownfield in its community. Site-specific proposals are appropriate when a specific site has been identified and the applicant plans to spend grant funds on this one site only. Additionally, assessment proposals may be submitted by coalitions of eligible entities to pool their grant funds. Performance period for assessment grants is three years.

www.simoncompany.com
1660 L Street, N.W. • Suite 501 • Washington, D.C. 20036 • (202) 659-2229 • Fax (202) 659-5234 •
len.simon@simoncompany.com

EPA anticipates awarding an estimated 11 new Revolving Loan Fund (RLF) grants for approximately $11 million. RFL provides funds for a grant recipient to capitalize a revolving fund and to make loans and provide subgrants to carry out cleanup activities at brownfield sites. An individual applicant, who does not have an active Brownfields RLF Grant, can apply for up to $1,000,000. Funds may be used to clean up sites contaminated with petroleum and/or hazardous substances.

EPA anticipates awarding an estimated 147 cleanup grants for an estimated $29.5 million**.** The Cleanup grants provide funding to carry out cleanup activities at specific brownfield sites owned by the applicant. An individual applicant can apply for up to $200,000 per brownfield site and can submit up to three site-specific cleanup proposals. A separate proposal must be submitted for each site. *We have included the grant guidelines for your review.*

Cities Closing Firehouses in Budget Crisis

Waves of controversial "rolling brownouts" have been occurring in firehouses across the nation due to an ever increasing number of city budget crises. Rolling brownouts are when different fire companies are shut down on different days to reduce a city's overall cost of fire and other emergency responses. These brownouts have come with many firefighter layoffs as well. This has been noted by many fire chiefs and union officials to be the deepest and most widespread cuts they have seen in recent history. The unpredictability of the profession can often leave firehouses overstaffed and leave more open in an area than necessary. "It's roulette. I'm always worried that something's going to happen when one of these companies is closed," said Baltimore City Fire Chief James Clack. An additional financial strain has been the cost for the city paying so many pensions when unions uphold firefighter's right to retire after 20 years of service. San Diego is being looked at as a prime example of how this can pull a city into greater financial trouble. The city's pension fund has only two-thirds of the money it needs to pay the benefits promised to retirees and faces a shortfall of $2.1 billion. *We have attached the article for your review.*

FHFA Report on Enterprises' Financial Condition

This week the Federal Housing Finance Agency released its first *Conservator's Report on the Enterprises' Financial Condition*. The report provides an overview of critical aspects of the financial condition of Fannie Mae and Freddie Mac (the Enterprises) during their conservatorship. The report will be released on a quarterly basis following the filing of the Enterprises' financial results with the Securities and Exchange Commission. The report includes information on Fannie Mae and Freddie Mac's: 1) presence in the mortgage market, 2) credit quality of their mortgage purchases, 3) sources of losses and capital reductions, and 4) loss mitigation activity. *We have included the release as well as a portion of the report for your review.*

GAO Wireless Industry Report

This week Rep. **Edward J. Markey**, Rep. **Rick Boucher**, and Rep. **Henry A. Waxman** released a report by the Government Accountability Office (GAO), which examines changes in the wireless industry over the past decade, consumer and stakeholder perspectives of regulatory policies and industry practices, and Federal Communications Commission (FCC) strategies to monitor industry competition.

The primary recommendation of the report states that the FCC should expand its data collection on such metrics as special access rates, prices, and capital expenditures in order to improve its monitoring and annual reporting on competition in the wireless market. Rep. Waxman, Chairman of the Committee on Energy and Commerce said about the GAO report, *"Today's report underscores the need for the FCC to expand its collection and review of data to monitor wireless competition and its impact on consumers. It is time for the FCC to complete its evaluation of special access pricing. Pro-competitive policies in the special access market are essential to maximize choice, affordability, and technological innovation in the wireless market."* We have attached the release as well as a summary of the GAO report for your review.

Recovery Act Transportation - Infrastructure Investment

The House Committee on Transportation and Infrastructure announced this week that the investment of funds provided under the American Recovery and Reinvestment Act for highway, bridge, transit, and water infrastructure projects has reached 93 percent. The latest transparency and accountability information reported to the Committee shows that $35.1 billion of the $38 billion available for highway, transit, and wastewater infrastructure formula program projects under the Recovery Act, or 93 percent of the available funds, has been put out to bid on 19,037 projects. Within this total, 18,473 projects, totaling $34.1 billion or 90 percent, are under contract. Work has begun on 17,820 of these projects, totaling $33.3 billion, and work has been completed on 7,889 of these projects, totaling $6.3 billion. The data shows that 41 states have invested 100 percent of their Recovery Act funds under the Clean Water State Revolving Fund program. Seven other states have more than 90 percent invested in projects that are underway or completed. *We have included the release for your review.*

Chairman Boxer on Transportation Innovation

This week Senator **Barbara Boxer, Chairman** of the Senate Environment and Public Works Committee, spoke at a Roundtable meeting in Los Angeles on the topics of Job Creation, Transportation Reform, and LA's unique 30/10 Initiative. Senator Boxer spoke about the importance of passing the 30/10 Initiative which would use the long-term revenue from the Measure R sales tax as collateral for long-term bonds and a federal loan which would allow LA Metro to build 12 key mass transit projects in 10 years, rather than the initially planned 30. The change would accelerate the projects, add thousands of jobs, ease congestion and reduce pollution, as well as improve regional California transit systems. Senator

Boxer also voiced her support of the Transportation Infrastructure Finance and Innovation Act (TIFA). *"TIFIA helps communities leverage their transportation resources through credit assistance and other programs. According to the Federal Highway Administration (FHWA), every dollar made available through TIFIA can mobilize up to $30 in non-federal investment. That's the kind of tool we need more of."* We have included Senator Boxer's statement for your review.

Please contact Len Simon, Claire Colegrove or Rukia Dahir with any questions.

This page intentionally left blank

MEMORANDUM

TO: Dennis Fay
Alameda County Congestion Management Agency
FROM: CJ Strategies
RE: Legislative Update
DATE: August 31, 2010

Both the House and Senate will remain in recess until after Labor Day; they will return on September 13. They will return for what will amount to a three week stretch of activity before target adjournment of October 8th for the mid-term elections.

September will be a busy month for Congress, particularly the Senate. A few of the big issues facing the Senate in September are: whether to extend the Bush tax cuts, climate change legislation, small business incentives legislation, defense authorization, and the annual appropriations bills. The House will also focus on the annual appropriations bills.

Livable Communities

On August 3, the Senate Banking, Housing, and Urban Affairs Committee approved by voice vote the Livable Communities Act of 2009 (S. 1619). The bill would authorize $2.675 billion in grant funding over four years to regions and localities for sustainable development planning and implementation around housing transportation, environmental and land use projects. The bill received no Republican support, but the senior Republican at the markup, Senator Bob Bennett (R-UT), said that he may be able to support the bill before it goes to the full Senate. The original bill included $4.15 billion in grant funding over four years but was scaled down in the amended version. Of the $2.765 billion authorized in the amended bill, $475 million is for planning grants and $2.2 billion is for implementation grants to develop and preserve affordable housing, support transit-oriented developments and improve public transportation.

A central component of the bill is the formal establishment of the Interagency Council on Sustainable Communities, an existing partnership between the U. S. Department of Housing and Urban Development, the Department of Transportation, and the Environmental Protection Agency focused on better coordination between federal agencies on sustainability issues including research and grants.

The final bill also includes a 15 percent set aside for rural communities under 200,000 in population. The manager's amendment added a new Regeneration Planning Grant Demonstration Program authorized at $80 million over four years that is designed to help communities with a large number of vacant and abandoned lots. It also added an Infrastructure

Credit Facility Program to Support Transit Oriented Development that is authorized at $100 million over four years.

We do not anticipate the full Senate will take up the bill in September due to the crowded legislative calendar. Representative Ed Perlmutter (D-CO) introduced a companion bill (HR 4690). There has been no committee action on the House companion.

Surface Transportation Authorization

Although there has been little movement in either chamber over the last few months, the current extension expires on December 30, 2010. We anticipate there could be action to extend the program during the lame duck session. Department of Transportation Secretary Ray LaHood recently reiterated the Obama Administration's opposition to raising the federal gas tax, saying a combination of other financing methods could be used to pay for a $500 billion surface transportation authorization bill. LaHood claimed that a mix of other revenue sources, such as tolling, public-private partnerships and an infrastructure investment fund, could supplement the current 18.4-cent-per-gallon federal gas tax to such a degree that lawmakers would not have to increase it.

The Obama Administration is seeking $4 billion to create a National Infrastructure Innovation and Financing Fund that would offer grants, and leverage state and private-sector dollars to help fund transportation and other infrastructure projects. However, neither the House nor Senate Appropriations Committees included that money in their respective FY 2011 transportation spending bills, stating that the program should be authorized in the next bill before funding is appropriated.

LaHood commented that although the financing for legislation to replace SAFETEA-LU has not yet been worked out, it should be the first major bill taken up after the nation's economy has rebounded. He noted that the White House still plans to release a set of principles to guide the authorization debate in Congress, but he did not put a timetable on when that would happen.

FY 11 Appropriations

The FY11 appropriations process finally began in the weeks leading up to the July Fourth recess, but progress this year will be hesitant and incomplete. This year's appropriations process began notably later than in previous years as Democratic leaders focused on other legislation such as the "extenders" package to create and preserve jobs, and on difficult negotiations over a top-line discretionary spending level for the year. The full House approved its first FY11 bills: MilCon VA and THUD the week of July 26 (these are the only two bills that have also been approved by full committee). The full Senate has not taken up any of its bills on the floor because Republicans and Democrats have still not reached a final agreement on its top line numbers.

It already was unlikely that Senate Democrats would try to bring any appropriations bills to the floor before November's elections, and the lack of a formal bipartisan agreement on spending would effectively prevent the consideration of any individual spending bills, except perhaps a continuing resolution to keep the government running when the new fiscal year begins on October 1.

THUD

The full House approved its THUD bill on July 29, while the Senate Appropriations Committee approved its draft on July 22. The House bill includes $67.4 billion in discretionary spending, which is $1.3 billion less than the President requested and $500 million less than FY 10 levels. Under the House bill, the Transportation Department would receive $79.4 billion in total funding; this is an increase of $3.7 billion over FY 10 levels and $1.7 billion more than requested. The Senate draft provides $67.9 billion.

- The House bill includes $45.2 billion for the Federal Highway Administration (FY10 enacted level is $42.1 billion; the Senate provided $42.6 billion.
- The House bill includes $400 million for the "TIGER" national infrastructure investments grants program, under which the Transportation Department makes discretionary grants for local transportation projects. The president had proposed to terminate the program, which received $600 million in 2010; the Senate draft would provide $800 million.
- The House bill includes $11.3 billion for the Federal Transit Administration – this is $500 million above the FY10 enacted level and $575 million above the President's Budget request; the Senate draft would provide $10.8 billion.
- Both House and Senate bills include $150 million for HUD for Sustainable Communities initiatives to promote integrated housing and transportation planning

In addition, the subcommittee draft includes **$1,000,000 for the I-80/Gilman Street Interchange**.

Energy

Originally, the Senate energy and oil spill debate was scheduled to occur the first week of August. However, after weeks of content talks, Senate Majority Leader Harry Reid (D-NV) postponed the debate on a spill bill or a broader measure until September. At issue is how big the package should be and whether it should include provisions such as renewable energy standards (RES) and other energy conservancy standards. As of now, it appears that a carbon cap is off the table for any legislation the full Senate may take up in September. The likelihood of movement on an energy bill this fall is questionable as Congress races to the end of the 111th Congress. They face an overloaded legislative calendar in September with the looming mid-term elections in November.

This page intentionally left blank